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THE UNIVERSITY OF ALBERTA
PROJECTION OF POTENTIAL EDUCATIONAL EXPENDITURE REQUIREMENTS
IN THE NORTHWEST TERRITORIES, 1971-1981

by



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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, and thesis entitled Projection of Potential Educational Expenditure Requirements in the Northwest Territories, 1971-1981, submitted by Lucie Celine Laliberte in partial fulfilment of the requirements for the degree of Master of Arts.

ABSTRACT

The purpose of this study is to try to forecast the educational expenditures for the Indians and Eskimos of the Northwest Territories in 1981. The forecasts are based on future school enrolment and projected expenditures per pupil.

The forecast of future school enrolment is based on the population trends and on the past behaviour of the school population. In order to study past behaviour and to forecast future behaviour, a special technique is developed and adapted to the conditions of the Northwest Territories.

The forecast of the 1981 expenditures are based on past expenditures, and a certain rate of increase due to inflation and to the real growth in educational expenditures is taken into account. The past expenditures are compared with Canadian norms (per pupil) and with their place in the total budget (both federal and territorial).

Also, in order to see which level of authority (administrative, financial, or academic) is responsible for education in the Northwest Territories, an historic and descriptive view of the Northwest Territories' educational system is presented.

Finally, another possible way of planning the educational system is presented. This is done in such a way that it can be compared with the overall planning of the economy.

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CHAPTER ONE

THE NATURE OF THE STUDY

A. Purpose Of The Study

This study is intended to project educational expenditures in the Northwest Territories for the native people (Indians and Eskimos) for the next ten years. These projections of expenditures will be limited to elementary, secondary, and vocational programmes. More specifically, this study will first examine the educational system in the north and its unique features in order to provide a realistic framework for examining future enrolment and expenditure levels.

The second phase provides estimates of total enrolment levels and changes in the participation rate. The last phase will project educational expenditures to give estimates of total educational expenditures at the end of the next decade.

B. Methodology Of This Study

Since resources are limited, governments must plan carefully so as to make the best use of what they have and decide what proportion shall be allotted to formal school education¹, semi-skilled training, adult training and retraining. Education is a necessary input for improving production and raising the standard of living. This is based on the assumption that only an economically efficient educational system can provide for the cultural and humanitarian goals of education. This is easily accounted for, because every educational system which is not

1. Throughout this study, formal education refers to elementary and secondary education, teacher training and higher education.

based on a socio-economic structure only widens the gulf between the students' needs and aims and everyday reality.

Any self-actualization requires an environment designed to recreate and stimulate further development of previous education and training. If this environment is not provided, problems of adaptation and frustration remain uppermost, and prevent any form of well-adjusted development. In the light of this consideration, it can be seen that only an "economically efficient" educational system can furnish a satisfactory milieu for the personal development of its students.

The widening of man's horizon through education and training and the acquisition of skills represent a major policy objective, as does the development of the ability to enjoy meaningful and full employment. This creates, however, the need for planning in order to provide complementary job opportunities as the educational level of the population increases. Thus, a census is necessary to provide demographic data by regions, educational levels, occupational information, and other data for assessing the present situation and planning ahead.

Owing to population growth and the great expansion in schooling on the one hand, and to the increased rate of industrialization, technical progress and scientific discovery on the other, governments must plan future needs with regard to the constraints of financial resources. In other words, all planning within the educational system requires a manpower forecast programme. This programme involves:

"estimates of the numbers of people required at the forecast date in each economic activity and occupation and estimates of the

numbers of people who must be trained to meet these requirements"¹.

Thus, a certain amount of forecasting would allow educational authorities to predict the number of positions open in the various kinds of employment within the Territories, and to organize their educational programmes accordingly.

Moreover, planning with respect to the labour force can usually be thought of in terms of two different levels of specificity of recommended action, one general and one more specific as follows:

- i) "With respect to planning the impact of education on the labour force in general terms. There are various programmes aimed at strengthening certain subject matter areas, and increasing the likelihood of higher study, especially in crucial areas. While such programmes do not directly affect the manpower problem in a given occupation, they do have an effect over a broad range of occupations.
- ii) With respect to labour force problems matching numbers needed with numbers trained in relation to a given level of training at any given time".

However, because statistical evidence is inadequate, only the first of these methods will be considered in this thesis. To foresee the future economic needs of the Northwest Territories, for ten years hence, is understandably difficult, in as much as the future development is random and rather unpredictable.

C. Assumptions

In order to project the development of the educational system in the Northwest Territories, it is necessary to make some assumptions about future enrolment levels. Since changes in enrolment will likely be

1. B.W. Wilkinson, Studies in the Economics of Education, Ottawa: Queen's Printer, July 1965, p. 37.

changes in the cultural values of the indigenous population, assumptions must be made about the qualitative effects of changing societal values on a quantitative index such as educational enrolment. Unfortunately, it is very difficult to make accurate qualitative assumptions, and these qualitative assumptions necessarily introduce an element of the tentativeness in this study.

The major assumption is related to the value of extended educational training for the indigenous population in the Northwest Territories in the next decade. Education is defined in this study to be the development of every aspect of the human personality. This implies that education strives to relate man to his environment and increase his ability to adjust and function properly in this environment. However, education in the territories is often characterized by reliance on subjects which are irrelevant to the students' development.

The educational policy seems to be focused on the more narrow objective of increasing the employment potential of the student. If this is the case, then it can be assumed that the value of higher education will decline, if there is a decline in employment opportunities. Relegating the role of education to that of job-creating function suggests that the indigenous will not continue in the educational system if there are no visible or tangible rewards in the form of suitable and satisfying jobs. The lack of suitable jobs will result in continued low levels of participation. This tendency to drop out of the educational system before completing secondary education is enhanced by the cultural values of the indigenous people which differ from the 'competitive' nature and derivation of status through education in the southern Canadian milieu.

Thus, it does not seem likely that there will be any significant reduction in the high rate of 'drop-outs' within the next ten years. Expansion of educational facilities and other measures provide part of the rationale for assuming full participation of elementary school age children, those between the ages of six to thirteen years. It is at the secondary level that the drop-out will be more important.

One could speculate even further and predict that employment opportunities will decline at least relatively to the increase in population after the next decade and the drop-out rate could increase. Corrective measures taken by governments to prevent this development could be expected, and this would likely raise the per capita expenditures on education. However, this is very speculative and no attempt is made to consider the implications of such a development, since here we shall take account of only the next ten years.

Thus, the major assumption in this study is that we shall assume that no big changes in the educational enrolment will occur. The pattern in the past will be assumed to continue in the future.

D. Plan Of This Study

This study is divided into three main sub-topics. The first phase outlines the present educational structure, and the directions and particular constraints of this system in the Northwest Territories. This phase is presented in Chapter II.

Chapter III presents the second phase, which examines the likely changes in student enrolment in the next decade. Chapter IV presents projections of future educational expenditures per pupil, while Chapter V

combines student enrolment and expenditure per pupil to give total educational expenditures at the end of a decade.

CHAPTER TWO

EVALUATION AND PRESENT STATUS OF THE EDUCATIONAL SYSTEM

A. Introduction

The intention of this chapter is to provide a brief outline of educational developments in the Northwest Territories and the kinds of facilities and programmes existing at present. This is a valid component of this study since conditions in the Northwest Territories are sufficiently different from those prevailing in the provincial systems, so that the territorial system is unique. A second major reason for including this chapter is to justify the qualitative assumptions made about trends in educational enrolment.

Three reasonably distinct phases in the evolution of the educational system can be delineated, namely, the period prior to 1955, 1955-69 and from 1969 to the present. Religious institutions provided the most important part of native educational facilities until 1955 when the federal government assumed full responsibility before handing over control of education to the territorial government in 1969. The organization of schools is still divided into the three categories of district, company, and territorial schools. Territorial schools are the most numerous.

B. The Three Phases In Educational Development

Before 1955, the main educational facilities were provided by private institutions. The acceptance of full responsibility by territorial and federal governments was a gradual process.

Around 1949, the Indian Affairs Branch of the Department of Citizenship and Immigration became concerned about the Indian people (4,000) along the Mackenzie River. In 1949-50, it built schools at Hay River, Fort Rae, Rocher River, Fort Norman, Fort Good Hope, Fort Franklin and Fort McPherson. During the same period, the Department of Mines and Resources (now called the Department of Indian Affairs and Northern Development) built schools at Fort Smith, Fort Resolution, Fort Simpson, Aklavik, Tuktoyaktuk and Coppermine in the Mackenzie District and at Cape Dorset and Coral Harbour in the Eastern Arctic for Eskimos¹. The latter part of this period represents a transitional era in which the federal government began to accept responsibility for indigenous education.

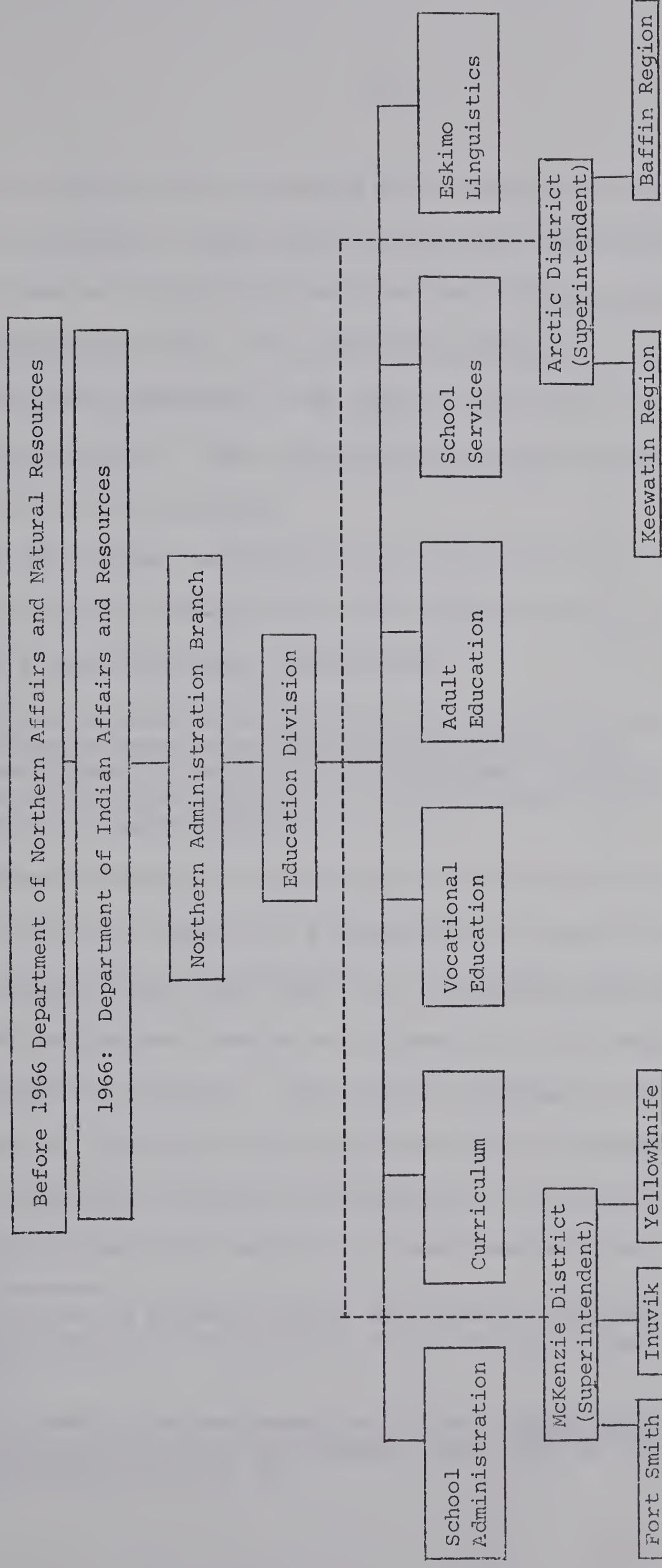
The second phase was initiated in 1955 when the federal government assumed responsibility for the education of Indians and Eskimos while the territorial government retained responsibility for the education of all other groups (See Chart I).

The educational system within the Territories was organized, administered, and supervised by a federal department. Under the Northwest Territories Act passed by the Canadian Parliament in 1875, authority to legislate with respect to education within the Territories was assigned to the Council of the Northwest Territories. As the Northwest Territories Council had no civil service to which it could assign the task of organizing and running a school system, and because the federal government had to provide education for the majority of the school-age population anyway, the Territorial Council exercised its right to legislate by enacting

1. "Education North of 60", The Canadian Superintendent 1964, Second Edition, Toronto: The Ryerson Press, 1965, p. 64.

CHART I

CHART OF THE ORGANIZATION OF THE FEDERAL DEPARTMENT FOR EDUCATION



a school ordinance and by entering into a educational agreement with the federal government. Under this agreement, the federal government undertook to provide schooling not only for the indigenous population but for the non-native as well. The territorial government in turn agreed to pay the federal government a sum equal to the rest of schooling for all non native students. Thus, all schools have operated on an ethnically integrated basis since 1955¹.

The third phase in the evolution of the educational system in the Northwest Territories arose out of the recommendations of the Carrother Report, a report which was a task force:

"formed to plan the steps required to carry out major recommendations of the advisory commission of the development of Government in the Northwest Territories. The Commissioner appointed in June 1965, presented his report in August 1966"².

This report recommended a reorganization of the territorial government with an executive composed of a Commissioner, a Deputy Commissioner and a permanent secretary (See Chart II). The Commissioner supervises regional headquarters located at Frobisher Bay, Fort Smith, Inuvik, and Fort Churchill (Manitoba). Each regional headquarter consists of divisions of the departments of the territorial government (education, social development, industry and development, local government). These divisions are under the authority of superintendents who are responsible

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1. Department of Northern Affairs and Natural Resources, Education Review 1963-64, Catalogue No. R71-4, Ottawa: Queen's Printer, 1964, p. 6.
 2. Government of the Northwest Territories, Annual Report of the Commissioner 1966-67, Yellowknife: Government of the Northwest Territories, 1968, p. 31.

CHART II

ORGANIZATION OF THE NORTHWEST TERRITORIES GOVERNMENT

(Responsibilities Of Each)

COMMISSIONER	DEPUTY COMMISSIONER	ASSISTANT COMMISSIONER
<u>SUPPORT UNITS</u> - Dept. of Personnel - Dept. of Information - Management Services - 4 Regional Directors	<u>PROGRAMME DEPARTMENT</u> - Dept. of Education - Social Development - Local Government - Industry and Development - Clerk of the Council - Fire Prevention	<u>SERVICES DEPARTMENT</u> - Territorial Treasurer - Territorial Secretary - Legal Affairs - Public Works - N.W.T. Liquor System

Source: Department of Indian Affairs and Northern Development, Annual Report 1968-69, Catalogue No. R1-1969, Ottawa: Queen's Printer, 1970, pp. 5-9.

to the regional director¹.

Conjointly with the reorganization of the territorial government, a director of a territorial Department of Education was appointed. Responsibility for education in the Mackenzie District and Eastern Arctic was transferred in 1969 and 1970 respectively to this territorial Department of Education.

The educational system was reorganized to consist of 1) formal education, and 2) continuing and special education. Elementary and secondary schooling fall under the rubric of formal education while continuing and special education is concerned with the advancement of literacy, community development, social and housing education, vocational education (apprenticeship, training), student grants, bursary programmes, teacher education programmes, and teacher assistant training² (See Chart III).

As one can deduce from the foregoing discussion, the administration of the education system in the Northwest Territories, prior to 1969, was from the top down. Now with the assumption by the territorial government of responsibility for education, one can assume that there will henceforth be more participation by local citizens in educational affairs.

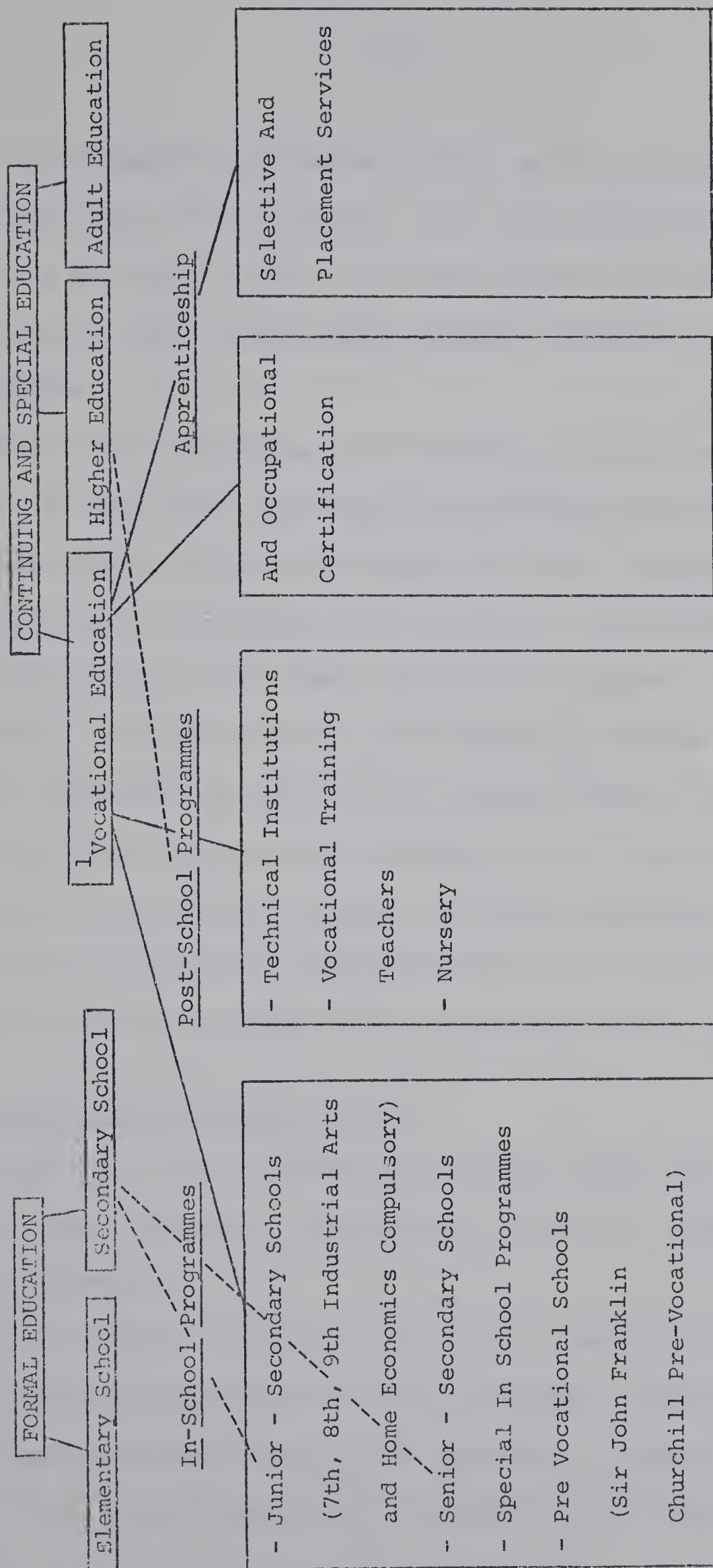
Two things appear to be the consequence of this decentralization of responsibility. One, the educational curricula appears to be less integrationist. Rather than being designed to assimilate Eskimos and Indians into southern ways and southern society, the focus of curricula

1. S. Hume, Edmonton Journal, Edmonton, Alberta, June 23rd, 1971, p. 7.

2. Government of the Northwest Territories, op. cit., 1970, p. 97.

CHART III

EDUCATION IN THE NORTHWEST TERRITORIES



Sources: 1. Department of Northern Affairs and National Resources, op. cit., 1964-65, p. 19.

2. Department of Indian Affairs and Northern Development, Annual Report, 1968-69, Catalogue No. R1, Ottawa: Queen's Printer, 1969, pp. 90-91.

is upon familiarization with native culture and in the native tongue for the first years, not in English. Two, rather than consolidating schools in a few large centres, the trend appears to be toward decentralization, with schools being created in as many settlements as is feasible.

Moreover, this new allocation of responsibility for education means that no longer will education in the Northwest Territories compete with federal objectives in the struggle for funds. Instead, in the future, education in the North will be related to other spheres of northern development in the quest for financial support.

Finally, the administration of the educational system in the Northwest Territories is organized on a regional basis, rather than a local or municipal (except district schools) one. The division of educational responsibilities between four regions emphasizes this trend. At least one implication of regionalization is the greater likelihood of uniform educational standard being established within each region.

C. The Educational System At Present

As mentioned in the introduction, there are three types of schools in the Northwest Territories today, namely, district, company, and territorial schools.

District schools, administered by boards of school trustees who are elected by taxpayers within the district, represent a decentralization of school administration common in the provinces. They are financed partly by local taxation and partly by grants-in-aid from the federal and

territorial governments¹. However, they have only a limited importance so far as only three school districts have been established.

Company schools were established in 1963-64 in Discovery and Tungsten with capital funds provided by mining companies; they are administered as territorial schools.

Thus, territorial schools form the bulk of the educational facilities provided in the Northwest Territories. These may be either residential or nonresidential. The policy of the territorial government is to provide elementary education in all viable settlements in the North. However, many children still live in small hunting and fishing camps beyond daily communicative distances. To ease the separation of students from their parents, the Department has constructed small residences in some communities (mainly in the Eastern Arctic). The residences house eight to twelve pupils who are cared for by an Eskimo house-mother and father. In 1965, twenty-five percent of the school population required residential facilities². By special arrangements, most of the larger pupil residences which are owned and financed by the government are administered under contract by religious institutions.

In the Mackenzie District most high school students living in smaller communities must live in residences in larger communities where high school programmes are offered. But in the Eastern Arctic, because of the desire of parents to live in communities with rental housing and the wish to have their children living at home, the need for residences

1. Department of Northern Affairs and National Resources, op. cit., 1963-64, p. 8.

2. "Education North of 60", op. cit., p. 25.

is less pressing. Many of the small student residences have been closed owing to the provisions of low rental housing and "ski-doo" travel. In the Keewatin Region, three student hostels were established. However, the same conditions which have made student residences unpopular in the Mackenzie District are at work here. Accordingly, Chesterfield Inlet was closed in the fall of 1969¹.

While an extension of small pupil residences is planned, pupil accommodation needs are being anticipated in the light of various factors. Student residences were an efficient means of ensuring schooling for children from isolated areas, but such residences necessitated the separation of children from their parents for long periods of time. In light of this, schools and school extensions are being planned for small communities. As well, where new pupil residences are required, it is suggested that small family-type residences are more feasible. Residences being constructed are designed for easy conversion to houses or offices, should they not be required in the future for pupil accommodation.

D. Other Types Of Educational Programmes

As well as the formal educational programme comprising elementary and secondary schooling (similar to provincial education), continuing and special education programmes are important and still expanding (See Chart III). These are examined in the remainder of this chapter.

a) Vocational Education

"In the North, vocational education is not considered an

1. D. Schweitzer, Keewatin Regional Dynamics, Regina: Institute of Northern Studies, 1971, p. 83.

alternative to general and academic education but is supplementary and complementary to it"¹. Academic and vocational programmes have been developed to ease the transition of the people of the Northwest Territories from a traditional society to a modern society characterized by radio, telephone, and other facilities.

The Continuing Special Education Division is responsible for vocational training in all areas outside the formal elementary and secondary schooling. By the Technical and Vocational Agreement with the Federal Department of Labour, at least fifty percent, and upwards of ninety percent, of the capital expenditures of vocational training of white residents is claimed by the Government of the Northwest Territories. The Department of Indian Affairs and National Resources pays for the cost of vocational training for Indians and Eskimos².

The purpose of the Vocational Education Program is to provide training and assistance for residents who have different levels of academic preparation. The Vocational Education programme is subdivided into five groups as follows: (1) Industrial Arts, Home Economics and Commercial; (2) Vocational Schools; (3) Apprentice Training and Occupational Certification Programmes; (4) Selection and Placement Services; and (5) Special Vocational Courses³. (See Chart III).

1. "Education North of 60", op. cit., p. 34.

2. Government of the Northwest Territories, op. cit. 1962-63. (The Act was passed in 1960), p. 23.

3. Ibid., 1964-65, pp. 17-20.

1. Industrial Arts, Home Economics and Commercial

Industrial Arts and Home Economics courses are compulsory for all pupils in Grade 7, 8, and 9 in the Northwest Territories and offered as optional courses in senior-secondary schools. Typing is offered as an optional subject in Grade 9 in larger schools.

In addition to formal courses, in 1964, a series of practical programmes in Home Economics, Industrial Arts and Related Activities were developed primarily for the older pupils and young adults who have a limited formal education¹. The programme entails the students passing one-half of their time in academic study and the remaining fifty percent of their time in vocational instruction and related work experiences². The Series is comprised of various practical courses.

2. Vocational Courses

Two Vocational High Schools established in the Northwest Territories offer vocational and occupational courses designed to prepare students for employment or for further training at post-secondary school institutions. At Sir John Franklin School, established at Yellowknife in 1958, occupational students spend their time evenly in academic upgrading courses

1. "Education North of 60", op. cit., p. 33.

2. D.K.F. Wattie. Education in the Canadian Arctic, Toronto: Indian-Eskimo Association of Canada, 1971, p. 298.

and trades training. Academic upgrading courses help to assure that by the time the student has completed his training, he possesses the general knowledge that enables him both to compete successfully on the labour market and gives him a background conducive to further training.

The occupational and vocational high school programmes consist of an initial one-year introduction to several vocational years. Following the first year orientation, boys specialize in one of the following fields: building, construction, motor-vehicle repair, heavy-duty equipment operations, heavy-duty equipment mechanics, industrial mechanics (mine maintenance) and commercial subjects. Girls, after their initial orientation year, major in one of the following: food preparation and service, clothing construction and repair, home management and beauty culture, and commercial enterprises is provided for pupils during their senior years.

The second Vocational School, at Fort Churchill, Manitoba, provides courses in academic upgrading as well as training in similar fields². Churchill Vocational Centre prepares students either for immediate employment, entrance to a trade school or apprenticeship or for continuation into secondary school courses in Grade 10.

1. "Education North of 60", op. cit., p. 33.

2. Wattie, op. cit., p. 299.

The most recent development with regard to vocational training school in the Northwest Territories was the announcement, in late June 1971, by Commissioner Stuart Hodgson of a proposed federal decision to phase out the Churchill Vocational Centre. A Vocational Training School currently being constructed at Frobisher Bay will serve the students from the Baffin and Keewatin regions currently being drawn to the Churchill Vocational Centre. Commissioner Hodgson speculated, as well, that a new vocational school will also be constructed for students from Arctic Quebec¹.

It is impossible to over-emphasize the importance of Vocational Training in the Northwest Territories. If northern residents can be trained so as to procure employment opportunities which are continually arising as Northern Canada is developing industrially, then the adaptation of the indigenous culture to modern technology will be made easier.

3. Apprenticeship, Training And Occupational Certification

Programme

An Apprenticeship Programme established in 1964 was "designed to ensure regular systematic and controlled training in different trades or occupations"². Apprenticeship programmes have been set up in 30 trades and the scheme is being expanded. Standards set by the programme are high enough

1. Hume, op. cit., p. 7.

2. Wattie, op. cit., p. 300.

for the skilled tradesmen to be accepted throughout Canada.

The apprentice trains both on the job and in trade school. While the apprentice is in trade school, the Department of Northern Affairs gives him a weekly allowance and pays for his expenses. As an incentive to the employer to operate an "on-the-job" training, the Department of Northern Affairs has set up a graduated wage-sharing policy in which the government and the employer share the cost of the apprentices' training. In the initial training stages, the government pays the bulk of the apprentice's wages; as the apprentice becomes more skilled, the employer pays a larger portion of his wages. Such training on-the-job contracts are usually of one-year's duration, and are supported by government expenditures on a less than fifty percent basis.

4. Selection And Placement Service

Five selection and placement officers act as an employment service in the Northwest Territories by providing counselling placement services. By a working arrangement between the National Employment Service and the Mackenzie District Selection and Placement Service, the selection and placement officers act as agents of the Northwest Territories¹. By another arrangement between the Department of Manpower and Immigration and the Selection and Placement Service of the

1. Government of the Northwest Territories, op. cit., 1964-65, p. 19.

Department of Indian Affairs and Northern Development, in April 1967, selection and placement officers act as agents of the Manpower Services with full access to the facilities of that service¹.

One of the major functions of the Selection and Placement Service is to increase the employment opportunities of native people by making certain positions available for them. To this end, the first of a group of special employment-oriented training courses has been developed in conjunction with the Department of Education². This is a series of Junior Office Management courses, which intermix employment periods with "in-job" training in order to produce junior managers for government and private enterprise. Discussions with persons in potential and existing industries seek to identify requisite training to develop the skill necessary for employment, and to establish, with the cooperation of the Department of Education, the necessary training courses to make northern residents employable. Other services performed by the Selection and Placement Officers include the selection of residents for enrolment in courses of education and training, and following completion of training, assistance in placing them in jobs.

The importance of the work of the selection and placement officers is obvious, given governmental policy to fill at least

1. Department of Indian Affairs and Northern Development, Education Review, 1966-67, Catalogue No. R71-4, Ottawa: Queen's Printer, 1968, p. 15.

2. Government of the Northwest Territories, op. cit., 1969, p. 40.

seventy-five percent of northern government positions with northern residents by 1976-77.

5. Special Vocational Courses

Special vocational courses are best examined by looking at the variety of such courses offered. A fur garment manufacturing course is given at Tuktoyaktuk. Instruction in silk screen printing was given at Holman Islands from October 1964 to February 1965 under the Small Business Management Training Programme with the cooperation of the Chamber of Commerce of Yellowknife, Fort Smith, and Hay River. Approval was given in January 1966 for special vocational courses in the following: bookkeeping and management accounting, a five-year programme of care for the elderly including boarding home care, low-rental housing, homemaking and hostel facilities¹. Vocational education thus constitutes a very important part of the education programme in the Northwest Territories.

b) Adult Education

Although the education of children was recognized to be the prime educational concern in the Northwest Territories, an Adult Education Programme was instituted as a major educational programme in 1965-66². In the initial stages of the Programme in 1967-68, the focus was upon housing education, in order to help the Eskimos to

1. Government of the Northwest Territories, op. cit., 1965-66, pp. 16-19.

2. Ibid., p. 15.

adjust to the new conveniences and conditions. Since then, the programme has expanded to include instruction in the following areas: up-grading education, English, Eskimo family health, family life education, French, photography, power engineering, radio electronics, sewing and Northern sewing, skill development, community leadership, training workshops, and others. The goal of courses like the ones above, which are offered as part of the Adult Education Programme, is to facilitate the continual adaptation of northern adults to their changing social, economic and cultural environment. To this end as well, an Adult Learning Centre was established at Frobisher Bay in 1969¹. The emphasis at this Learning Centre has been upon academic upgrading, but the Centre is currently being expanded and additional staff added to allow for more community-oriented curricula to be offered.

c) Higher Education

There are no higher educational facilities in the Northwest Territories. Northern students who wish to continue their education beyond high school must attend provincial universities and post-secondary school institutions. This being the case, the concern of the Higher Education Programme in the Northwest Territories is to make financial assistance available for all these students wishing to progress beyond high school.

Financial assistance includes both grants and Canada Students' Loans. In 1963, grants were first made available to students to

1. Government of the Northwest Territories, op. cit., 1969, p. 53.

cover education and transportation costs. Living costs had to be met by the student himself, with the help of Canada Students' Loans, first made available in 1964-65¹. In March 1967, however, the Northwest Territories Council approved a new Students Grants Ordinance which provided outright grants to cover the cost of education, transportation, and board and lodging. In doing so, the Northwest Territories Council made available to northern students the most ample financial assistance in all of Canada². During their period of study, first-year post-secondary school students receive \$3.00 per day for board and lodging, while students in their second or higher year receive \$2.00 per day. In addition, grants are given for educational and travel expenses.

In September 1971, a group of business men, professional men, and politicians from the Northwest Territories convened to discuss the establishment of a University in the Northwest Territories³.

E. Conclusion

The foregoing discussion of education in the Northwest Territories has recounted the efforts of government to establish school systems designed to educate indigenous people so as to allow them to cope with modern development in the North. However, there is evidence that the educational system is not yielding the desired results. The indigenous people have found it difficult to adhere to the new educational system

1. Department of Northern Affairs and Natural Resources, op. cit., 1963-64, p. 15.

2. Wattie, op. cit., p. 302.

3. Edmonton Journal, June 19, 1971, p. 8.

and school drop-outs are significantly above the Canadian average¹. Some of the fundamental traits of the indigenous northern culture have been lost to modernization. Northerners do not yet participate extensively in the economic development in the Northwest Territories. Northern natives are not a part of the administration that seeks to promote their own welfare. The role of the autochthonous people has been a passive one. Natives have been recipients of government programmes and not initiators of policy. And yet the educational system has not completely failed. On the contrary, the autochthonous people have not been assimilated². Rather, they are trying to define a group identity, an identity which their minority status makes it difficult for them to attain.

1. See Chapter IV, Figure 15.

2. Eric Goudreau, "Cross Cultural Education in the North," Arctic, Journal of the Institute of North America, 1969, p. 368.

CHAPTER THREE

PAST AND FUTURE SCHOOL - ENROLMENT

A. Introduction

Education is a major factor determining the distribution of employment and income of any potential labour force. The educational system affects labour force participation, both directly and indirectly. The labour force participation rates of certain age groups are dependent upon the level of full-time school enrolment. As well, the degree of labour force participation is indirectly affected by the level of educational attainment, since as the educational achievement of the population increases, the opportunity costs of remaining out of the labour force probably rise and the level of labour force participation climbs.

The role of education in the Northwest Territories has expanded steadily in the past decade. The impetus behind this enhancement of the role of the educational system and increased educational enrolment has been essentially two-fold: one, the increasing technological complexity of the economy and the concomitant societal belief in the individual's right to a good education; and two, with respect to the first factor, whereas a grade eight education would have been regarded as adequate a decade or so ago, high school graduation may now be required for the same position. This increased emphasis upon education has resulted in higher enrolment in educational institutions. The lack of education might be the major reason for the low employment and income level of Indians and Eskimos in the Northwest Territories. It is both more

difficult and more expensive to provide school services to isolated areas where a dispersed, native population often does not place the same value on education as do urban people.

Despite these obstacles, however, the proportions of young people enrolled in formal education has continued to increase steadily and pervasively throughout the North, regardless of economic circumstances or industrial structure.

Necessity Of Projection

In order to estimate future school and teacher needs, projections of school attendance at elementary, intermediate and higher levels are required. As well, projections of school enrolment and educational levels of the population provide a basis for the appraisal of the organization and operation of the educational system. Finally, it helps to know the cost involved in the future.

Plan Of The Chapter

The purpose here is to project school enrolment in the Northwest Territories for the next ten years, and following this a perspective for the next thirty years. Important in any projection of future needs is the technique used. Any general projection technique must be adapted to the unique conditions of the Northwest Territories. Minimally, cognizance must be made of the characteristics of education in both the Northwest Territories and the rest of Canada, and more specifically past enrolment in the Northwest Territories.

B. Description Of The Technique

The basis for a projection of future school enrolment trends in the Northwest Territories are historical data on school populations in the Northwest Territories, as well as estimations of future population numbers in the Northwest Territories. But past data are not enough. Any projection must attempt to capture the dynamic nature of a society; accordingly, estimations of future needs must take account of likely changes in the sizes of school rates, retention rates, and enrolment ratios.

One can arrive at a measurement of school enrolment population in one of three ways, depending upon which one of the following data one uses as a base population: i) the student's age; ii) the student's grade; and iii) the student's attainment level as measured by some form of standardized achievement test¹. All three points of departure have inadequacies. School enrolment measured in terms of age is probably heavily influenced by legal school-age. Grade level gives a crude measure, owing to the wide range of ability in any grade. The infeasibility of standardized achievement tests make them impossible to use here. Accordingly, estimations here must be based upon either or both of two techniques - age and grade.

The first projection technique is based upon the number of persons born in a given calendar year. One estimates the number of children beginning school in grade "X" for the first time from the number of

1. Dominion Bureau of Statistics, Student Progress Through the Schools by Grade 1960, Catalogue No. 81-513, Ottawa: Queen's Printer, 1960, p. 13.

children born $X - 5$ (or $X - 6$, or $X - 7$) years ago. The second technique is based upon the number of students enrolled in or entering the school system at a given point of time. One estimates how many children will be in grade six in year X . The two techniques do not produce the same results since the age at which children begin school varies (say from five to seven or eight years).

As a base, the number of persons born in a calendar year has the theoretical advantage of uniform meaning at all times and in all places. Enrolment in a particular grade has the practical advantage of making possible the necessary computation of drop-out and retention rates. This practical advantage gives the latter technique the overwhelming advantage - or it would but for the fact that the cause of age-grade retardation is societal¹. The evidence of age-grade retardation means that any calculation of future enrolment trends based solely on age-grade ratios is biased. This fact makes necessary a computation based upon both methods. In very general terms, calculations of future enrolment are made by first estimating Kindergarten and Grade One enrolment on the basis of population projections, and then by projecting the proportion of pupils likely to advance into the higher grades. Given the close

1. "The age-grade retardation is primarily due to inadequate exposure to and mastery of the language of instruction (English) as compared to their vernacular and the socio-economic disadvantages of their familial group. The latter cause is complex. It refers to a lack of understanding on the part of the illiterate (in terms of English) parents as to the correlation between education and size of wage income. Small houses do not provide the quiet time required for homework or outside reading. Malnutrition is also a factor in these families where a meal may entail a chocolate bar and other southern treats." See L.A. Burkhardt, Scouting in Canada: North, Toronto: Boy Scouts of Canada, National Council, 1970, p. 125.

relationship between births and new school beginners six years later, assumptions regarding fertility trends are of particular importance here:

"This combination of component method and grade ratios' method has the advantage of taking into account demographic changes as well as trends in student ratios from one grade to the next"¹.

The following four steps are involved in this projection technique:²

I. Population estimates for the five-year and six-year age group are obtained.

II. The number of pupils enrolled in kindergarten are estimated on the basis of five-year old populations.

III. The number of pupils enrolled in grade one are estimated on the basis of six-year old populations.

IV. "Grade ratios" (enrolment in one grade as a percentage of enrolment in the next lower grade in the preceding year) are projected for grades two to eight for each year.

"Given actual enrolment by grades, and grade one projections, future enrolment in grade two to eight is calculated by a series of successive multiplication with grade ratios"³.

Let us examine each of these steps in greater detail. Step I entails population estimates of five and six-year olds. Assumptions

-
1. W.M. Illing and Z.E. Zsigmond, Enrolment in Schools and Universities 1952 to 1975-76, ECC No. 20, Ottawa: Queen's Printer, 1967, p. 7.
 2. Z.E. Zsigmond and C.J. Wenaas, Enrolment in Educational Institutions by Province 1951-52 to 1980-81, ECC No. 25, Ottawa: Queen's Printer, 1970, p. 8.
 3. Ibid., p. 8.

regarding fertility rates assume here an importance hitherto unprecedented in projections based on demographic trends. Steps II and III establish the number of students enrolled in kindergarten and grade one taking the five and six-year old population, and applying age-grade ratios. Given the base population, Step IV is concerned with estimating the number and percentage of students. The reliability of calculating enrolment in one grade from data (real or projected) on the enrolment in the next lower grade in the preceding year is dependent upon the accuracy of estimations of age-grade bases (here Grade I). The calculation of the number of children who terminate their formal education is complicated by a number of factors. Among these are the following: movements of students into and out of the school system; late starting pupil retardation; pupil acceleration; extraneous contemporary societal changes (a problem involved in any measurement of dynamic phenomena); and the difficulty of covering all types of full-time schooling¹.

There are two methods of determining drop-out or retention rates, a direct and an indirect one.

The direct approach consists of a longitudinal study of either the entire population of pupils of a school system, or a representative sample thereof. Such a study would entail following these students through their entire educational careers (and for as long thereafter as is needed to ensure that they will not re-enroll in educational institutions). The feasibility of such a study is readily apparent.

1. Dominion Bureau of Statistics, op. cit., p. 8.

The indirect approach relies basically on grade enrolment statistics. While this method is less reliable than the former (because of certain elements of uncertainty), it is less costly and time consuming.

In Chart IV¹, N_{g+1}^{y+2} represents the number of pupils enrolled in grade $g+1$ and in year $y+2$. Successive years are numbered from left to right, while successive grades are numbered from top to bottom. Hence the diagonal line from the top left to the lower right (indicated by the arrows) represents the movement of a cohort of pupils through the school system. If there are no movements into or out of the educational system, no drop-outs, no accelerations, and no retardations, then $N_g^y = N_{g+1}^{y+1} = \dots$

The ratio N_{g+s}^{y+s} / N_g^y (grade factor) is used here as a crude measure of the retention rate of grade "g" students to grade "g+s". Students "retained" in grade $g+s$ are not necessarily the same students who were in grade "g" (s years later). Chart V illustrates what happens to that part of an initial school system; PO is the initial population in Grade I. In six years time, the majority of PO will be enrolled in Grade VII. Some, however, will be retarded one year (Grade VI); others, two years (Grade V). Still, others will have accelerated to Grades VIII and IX. These students who are not originally part of PO but who are now in Grade VII are represented by the unshaded area of the outer squares. These students are i) students who began school more than six years ago but have been retarded one or more years, ii) accelerated students who have caught up to the cohort, and iii) students from other school

1. Ibid., pp. 9-14.

CHART IV

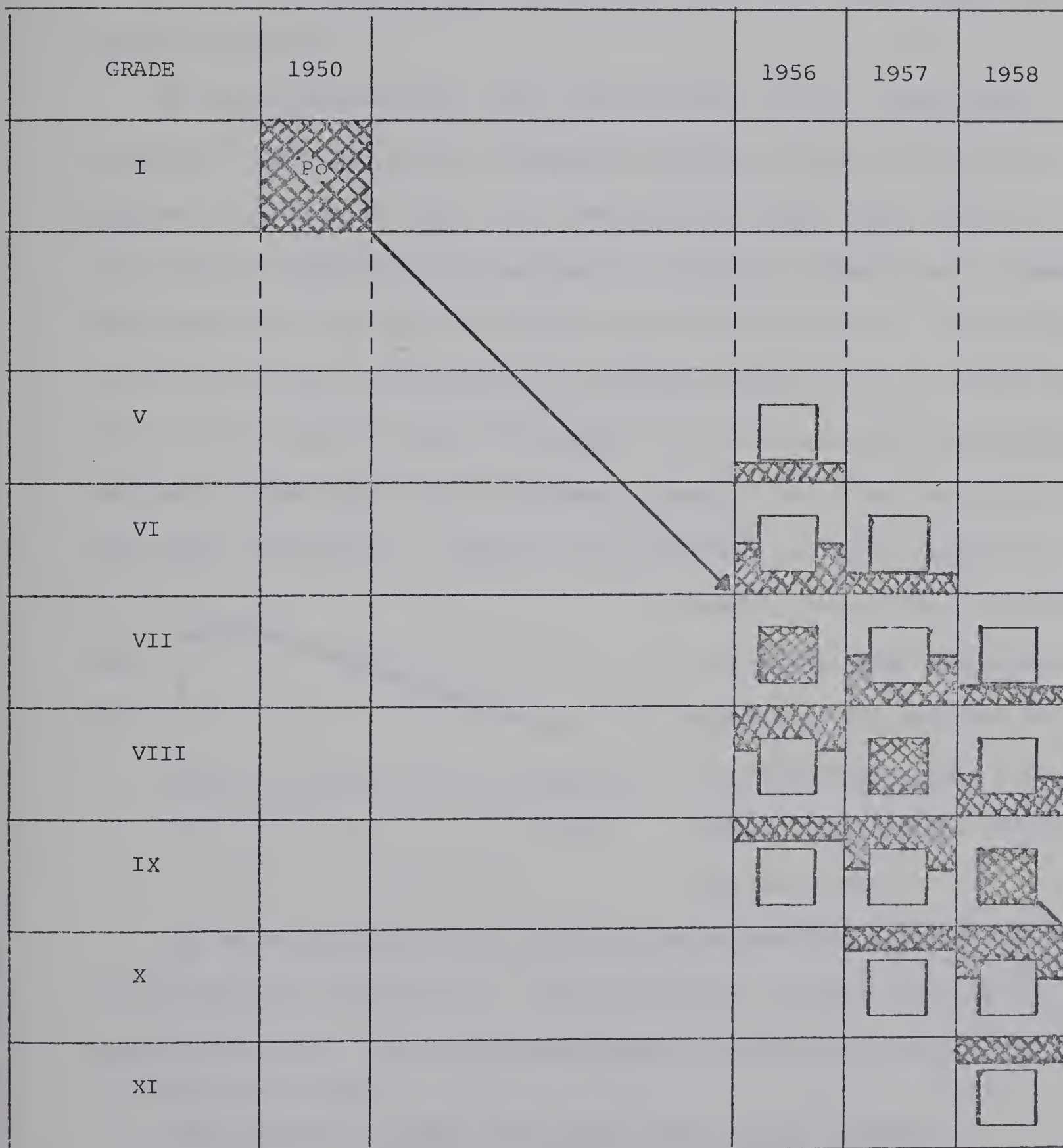
BASIC DATA TABLE

<u>GRADE</u>		<u>YEAR</u>						
	y	y + 1	y + 2		y+s-1	y + s	y+s+1	
g	N_g^y	N_g^{y+1}	N_g^{y+2}					
g + 1	N_{g+1}^y	N_{g+1}^{y+1}	N_{g+1}^{y+2}					
g + 2	N_{g+2}^y	N_{g+2}^{y+1}	N_{g+2}^{y+2}					
g+s-1								
g + s								
g+s+1								

Source: Ibid., p. 18.

CHART V

DISPERSION OF THE INITIAL POPULATION

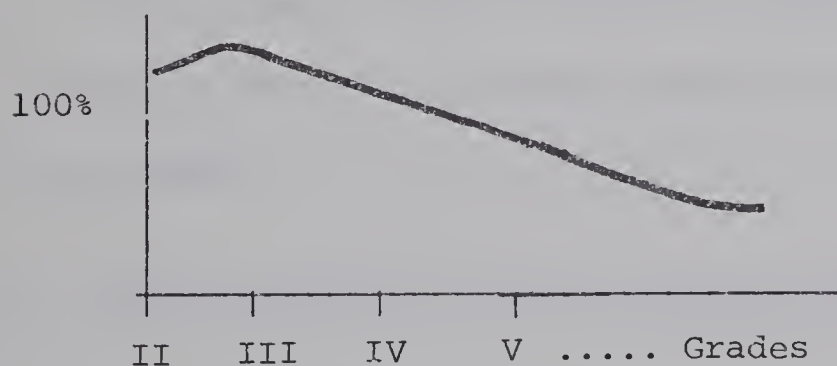


Source: Ibid., p. 18.

systems admitted into this school system from Grades II to VI.

More reliable estimates of enrolment are obtained if two or three samples of students rather than one cohort, are investigated and the results averaged.

By the above procedure, then, and with the use of a graph which represents the progression of students through the school system by a diagonal line from the upper left corner to the lower right corner, one can trace the numerical fluctuations of a group of students as it passes from Grade II in any year to Grade III the following year. More generally, one can follow the group until it reaches grade II + x, x years later. Now, if this retention rate is graphed, one will get a graph moving downward with senior high school enrolment generally less than one-half of the Grade II enrolment. However, it is possible, in early elementary



school, for enrolment figures to increase over 100 percent because of the combined effects of entrance of pupils into the system, retardation, and low drop-out rates.

The above projection technique thus makes possible a prediction of school enrolment populations. Such predictions, however, are prone to inaccuracy owing to their dependency upon the following conditions¹:

-
1. United Nations, General Principles for National Progress of Population: Projections as Aids to Development Planning, Population Study No. 38, New York: United Nations, 1965, pp. 21-25.

i) changing societal values regarding educational patterns, for example, if work and education become more integrated than they are now, enrolment figures will be affected; ii) future mortality and migration patterns; and iii) the accuracy of prediction of future number of births. The dependency of Northwest Territories enrolment predictions upon reliable estimates of birth numbers is the most serious weakness here where fertility rates are unstable. It pertains especially to projections of the numbers of elementary school children, which can be carried forward only six or seven years before the future number of births become a relevant factor. The educational planner requests long-range projections, extending over twenty or thirty years. Long-range projections are periodically revised in the light of information regarding changing birth rates and other demographic and enrolment factors.

This thesis seeks to provide complete data on past school enrolment in the Northwest Territories from which projections of future enrolment can be made.

C. Characteristics Of The Northwest Territories And Canada

I. Step One: Population¹

The population of the Northwest Territories and Canada can be compared along three dimensions: growth rate, relative proportions of births and deaths, and age distribution. As the comparison will make clear, school attendance projections in the Northwest

1. Almost all references for Step One are taken from Schweitzer, op. cit., pp. 1-173.

Territories will differ from those in Canada.

The population of the Northwest Territories continues to grow at an increasing rate while that of Canada grows at a decreasing rate. (See Table I and Figure I). A further analysis of the population characteristics shows that while the number of deaths in the Northwest Territories reaches Canadian norms, the number of births in the former is very much higher than the Canadian norms (See Table and Figure 2). One consequence of this is a high fertility rate for the Northwest Territories in the next 15-20 years.

Another important feature of the population is the age-sex structure. The sex distribution of the population assumes importance with respect to the planning of school facilities either when male and female attendance rates differ or when separate facilities are provided for the two sexes. Neither being the case in the Northwest Territories, account is taken of only the age distribution of the population.

a) Canada

Since the beginning of the 1950's, the number and percentage of children in Canadian school-age brackets have undergone substantial changes. As a result of the post-war baby boom, there was a dramatic upsurge in elementary school enrolment during the entire 1950's. As the last of the post-war babies entered school, and with the declining birth rates of the 1960's, elementary school enrolment has fallen off in recent years, and continues to decline in the

TABLE 1
POPULATION
CANADA AND THE NORTHWEST TERRITORIES
(1911 - 1966)

CANADA				NORTHWEST TERRITORIES		
YEAR	POPULATION	PERCENTAGE CHANGE BY YEAR	GROWTH INDEX	POPULATION	PERCENTAGE CHANGE BY YEAR	GROWTH INDEX
1911	7,206,643		100	6,507		100.0
1921	8,787,949	21.9	121.9	8,143	25.1	125.1
1931	10,376,786	18.0	143.9	9,316	14.4	143.2
1941	11,506,655	10.9	159.6	12,028	29.1	184.8
1951	14,009,429	21.8	149.4	16,004	33.1	246.0
1956	16,080,791	14.8	223.1	19,313	20.7	296.8
1961	18,238,247	13.4	253.1	22,998	19.1	353.4
1966	20,014,880	9.7	277.7	28,738	25.0	441.6

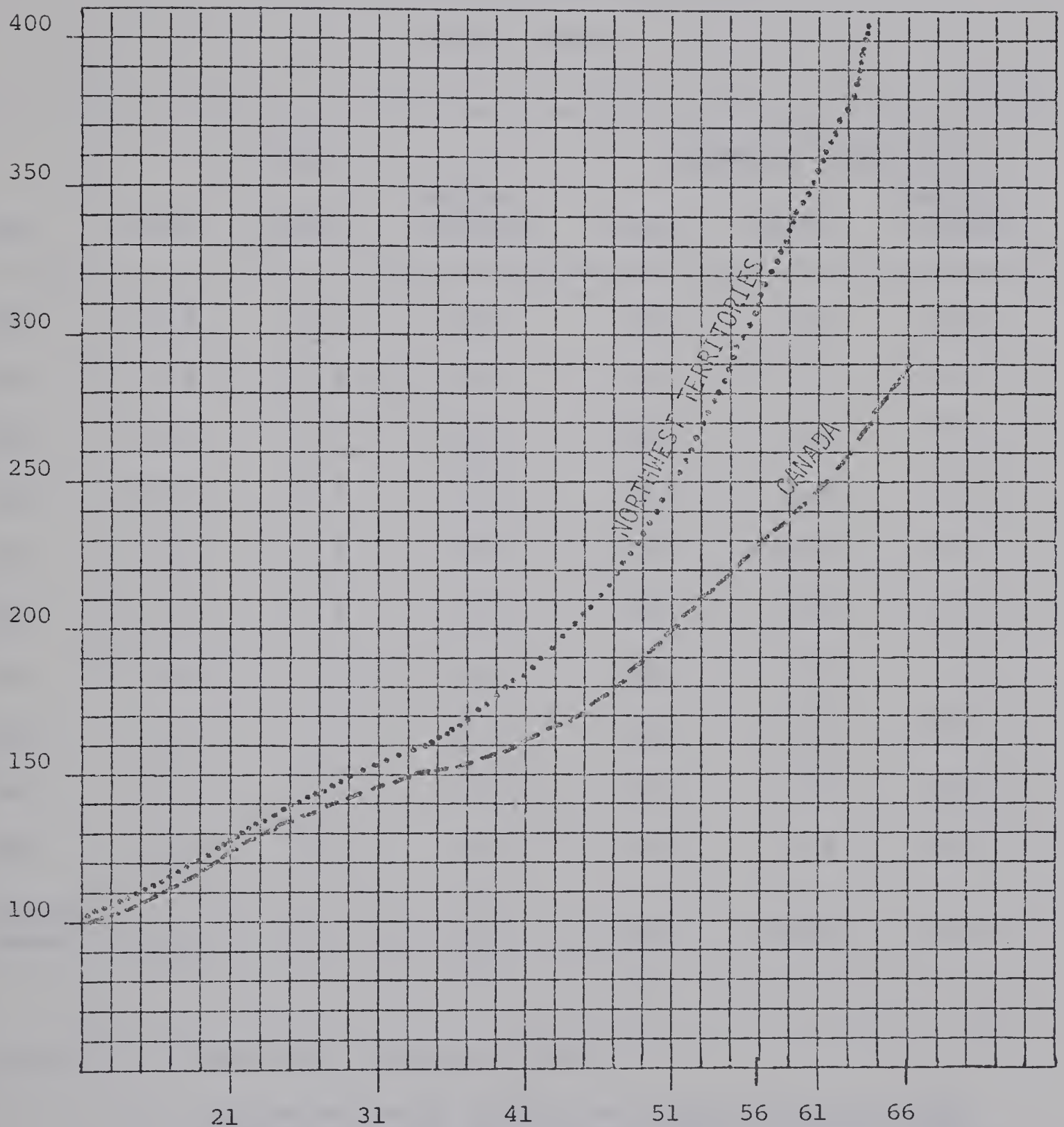
Source: Dominion Bureau of Statistics, Census of Canada, Catalogue No. 99-511, Bulletin 7-1-1, 1963; Catalogue No. 92-606, Bulletin 7-7-20, 1963; and Catalogue No. 92-606, Volume I (1-6), 1967, Ottawa: Queen's Printer, 1964, 1968.

FIGURE 1

COMPARATIVE POPULATION GROWTHS

CANADA, NORTHWEST TERRITORIES

(1911 - 1966)



Source: Table 1.

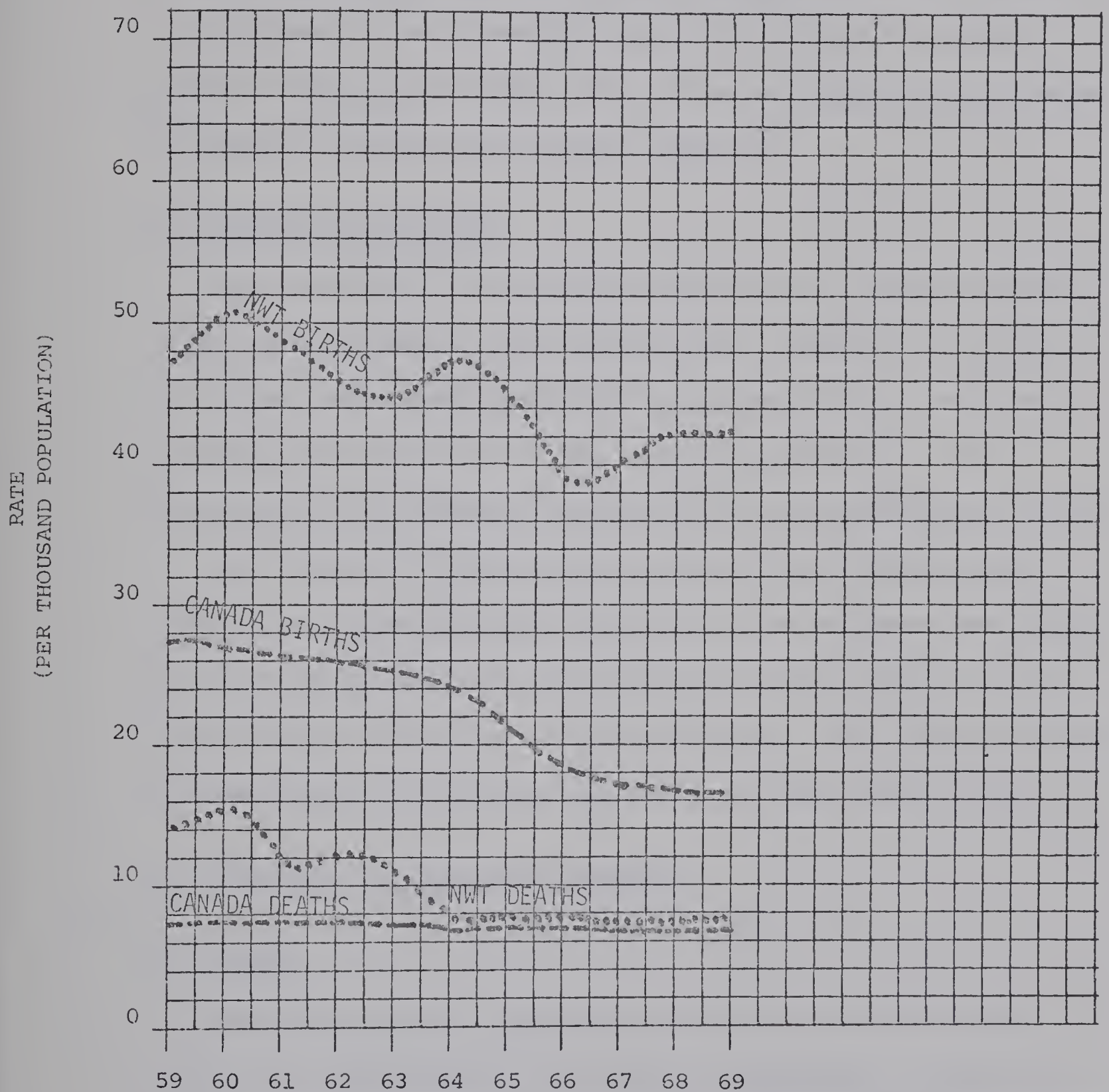
TABLE 2
BIRTH, DEATH AND NATURAL INCREASE RATES
CANADA AND THE NORTHWEST TERRITORIES
(1959 - 1968)

YEAR	<u>CANADA</u>			<u>NORTHWEST TERRITORIES</u>		
	BIRTH	DEATH	NATURAL INCREASE	BIRTH	DEATH	NATURAL INCREASE
1959	27.4	8.0	19.4	47.1	13.8	33.3
1960	26.8	7.8	19.0	49.7	14.2	35.5
1961	26.1	7.7	18.4	48.6	11.4	37.2
1962	25.3	7.7	17.6	45.4	12.4	33.0
1963	24.6	7.8	16.8	44.7	10.2	34.5
1964	23.5	7.6	15.9	46.9	8.0	38.9
1965	21.3	7.6	13.7	44.1	7.3	36.8
1966	19.4	7.5	11.9	40.3	8.0	32.3
1967	18.2	7.4	10.8	41.7	7.5	34.2
1968	17.6	7.4	10.2	41.9	7.4	34.5
Average Annual	23.0	7.7	15.3	45.0	10.0	35.0

- Sources: 1. Schweitzer, op. cit., p. 49.
2. Dominion Bureau of Statistics, Vital Statistics 1968, Preliminary Annual Report, Catalogue No. 84-201, Ottawa: Queen's Printer, 1970.
3. Department of National Health and Welfare, Report on Health Conditions in the Northwest Territories, Ottawa: Queen's Printer, 1962, 1963, 1964, 1965, 1966, 1967, 1968 and 1969.

FIGURE 2

COMPARATIVE BIRTH AND DEATH RATES
CANADA AND THE NORTHWEST TERRITORIES
(1959 - 1969)



Source: Table 2.

1970's. Secondary school enrolment began to be affected by the baby boom by the second half of the 1950's. It is anticipated that secondary school enrolment will reach a peak around 1975. Finally, the enrolment in post-secondary school institutions has already begun to swell as the leading edge of the early post-war birth wave is entering institutions of higher learning¹.

b) Northwest Territories

The situation in the Northwest Territories is quite different since the population is still accelerating. Moreover, in 1966 the 5 - 24 age group constituted 41.2% of the population. (The same age group comprised 38.3% of the Canadian population)². The population of the Northwest Territories is thus comparatively young.

The increasing population will thus be one of the factors inducing an increasing school enrolment in the Northwest Territories. The other factor accounting for growing attendance figures will be the increasing rate of participation in school. The remaining steps of this projection technique take account of this latter factor.

II. Step Two: Kindergarten Enrolment

a) Canada

Table 4A presents kindergarten enrolment from 1951-52 to 1967-68 as a percentage of the 5-year old population in Canada as a whole, and for the ten provinces where percentages vary significantly.

1. Illing and Zsigmond, op. cit., pp. 3-4.

2. See Table 3 and Figure 3.

TABLE 3
AGE STRUCTURE (BOTH SEXES)
CANADA AND THE NORTHWEST TERRITORIES
(1966)

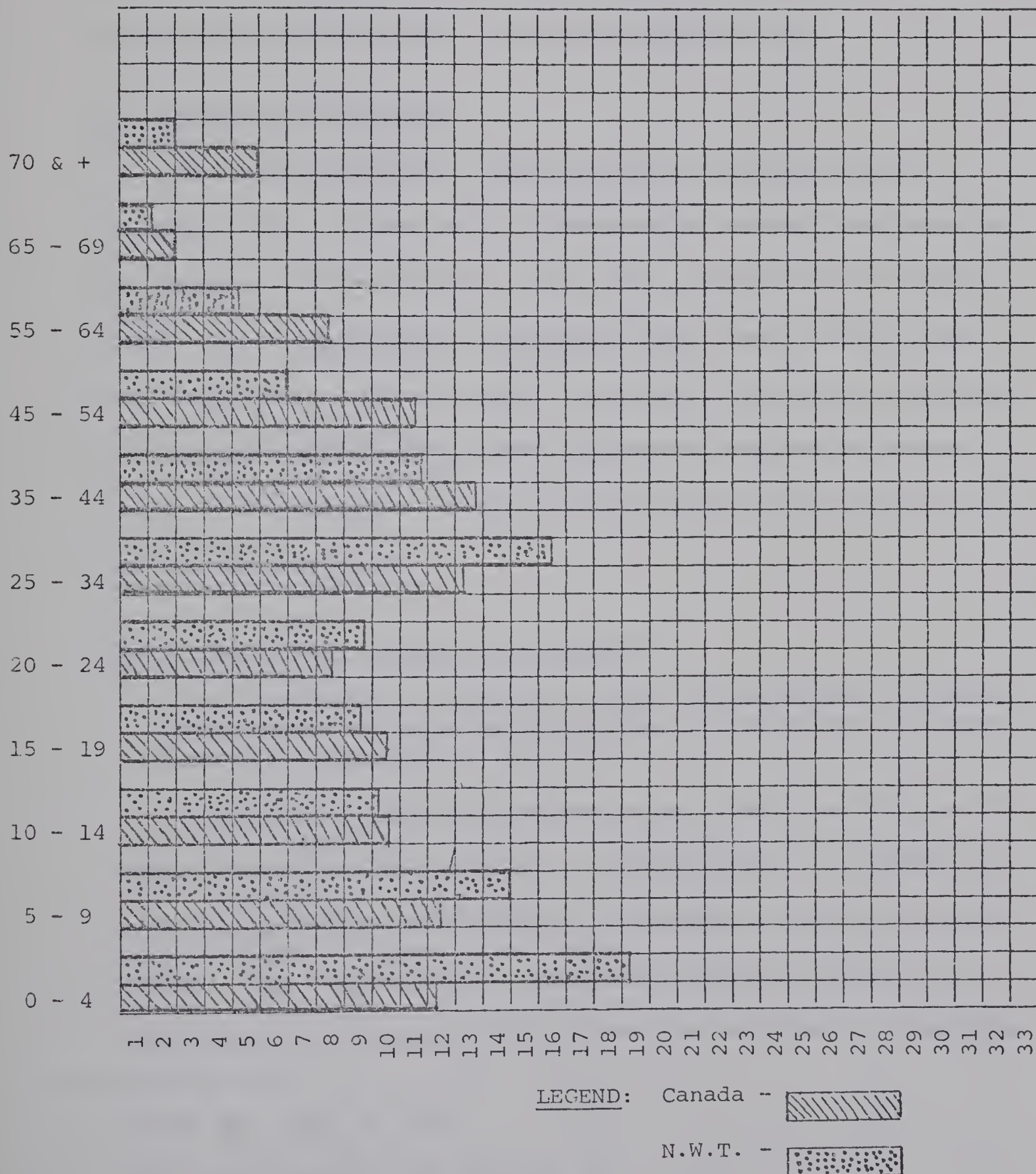
ALL AGES	CANADA		NORTHWEST TERRITORIES	
		%		%
TOTAL	19,910,400	100	28,738	100
0 - 4	2,211,000	11.1	5,232	18.2
5 - 9	2,251,000	11.3	4,051	14.0
10 - 14	2,077,000	10.4	2,921	10.1
15 - 19	1,855,800	9.3	2,454	8.5
20 - 24	1,457,600	7.3	2,470	8.6
25 - 34	2,433,700	12.7	4,475	15.5
35 - 44	2,534,300	12.7	3,131	10.8
45 - 54	2,083,300	10.4	1,990	6.0
55 - 64	1,486,000	7.4	1,229	4.2
65 - 69	524,500	2.0	324	1.1
70 +	995,200	5.0	461	1.6

- Sources:
1. Dominion Bureau of Statistics, Census, 1966, Catalogue No. 92-606, Ottawa: Queen's Printer, 1967.
 2. M.W. Illing, op. cit., p. 40.
 3. R.M. Hill, Northwest Territories Population Size by Settlements, Inuvik Research: Arctech Information, 1969.

FIGURE 3

AGE STRUCTURE FOR 1966

CANADA AND THE NORTHWEST TERRITORIES



Source: Table 3.

Sixty-three percent of Canadian five-year olds attended kindergartens in 1967-68, while provincial ratios vary from 2% (Prince Edward Island) to 104% as a proportion of five-year olds (Nova Scotia). From Figure 4, it is clear as well, that the enrolment ratio at the kindergarten level grows exponentially.

b) Northwest Territories

The first pre-school classes opened at Frobisher Bay in September 1966. Subsequently, kindergarten classes have begun at Fort Simpson, Fort McPherson, Pond Inlet, Eskimo Point and Baker Lake¹. As it becomes more recognized that younger children are more adaptable to the new school environment and routine, and to the English language, pre-school programmes continue to develop. Table 4B shows that pre-school class enrolment figures have risen in the last few years.

III. Step Three: Grade One Enrolment

"The expansion of elementary school enrolment over the past eight years reflects the sharp rise in the number of births and the new opening of schools"².

Estimates of grade one enrolments are based upon data on the number of six-year old children in the population. Enrolment in grade one is clearly a function of the number of births six years earlier. The relationship is not direct, however, since even though almost all six-year old children are enrolled in grade one,

1. Wattie, op. cit., p. 295.

2. Illing and Zsigmond, op. cit., p. 5.

TABLE 4A

ENROLMENT RATIOS FOR KINDERGARTEN (AGE 5)

CANADA, THE PROVINCES AND THE NORTHWEST TERRITORIES

(1951 - 1970)

LOCATION	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Canada	27.7	29.0	30.9	32.4	33.4	34.5	36.8	38.8	40.7	44.5	49.6	54.3	63.0			
Newfoundland	--												7.1			
Prince Edward Island	3												2			
Nova Scotia	103												104			
New Brunswick	--												1			
Quebec	6												63			
Ontario	64												91			
Manitoba	28												52			
Saskatchewan	14												20			
Alberta	1												2			
British Columbia	7												42			

1 48 1

TABLE 4A (Continued)

LOCATION	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Northwest Territories																
Indians										18.0	14.0	14.0	--	40.0	60.0	
Eskimos										5.0	5.0	8.0	57.0	104.0	93.0	
-- not available																

Sources: 1. Z.E. Zsigmond and C.J. Wenaas, op. cit., p. 24.

2. Dominion Bureau of Statistics, Preliminary Statistics of Education 1969-70, Education Division April 71, Catalogue No. 81-201 Annual, Ottawa: Queen's Printer, pp. 18-21.

3. Tables 4B and 5.

TABLE 4B

KINDERGARTEN AND GRADE ONE - TOTAL AND RATIO ENROLMENT

NORTHWEST TERRITORIES

(1963 - 1972)

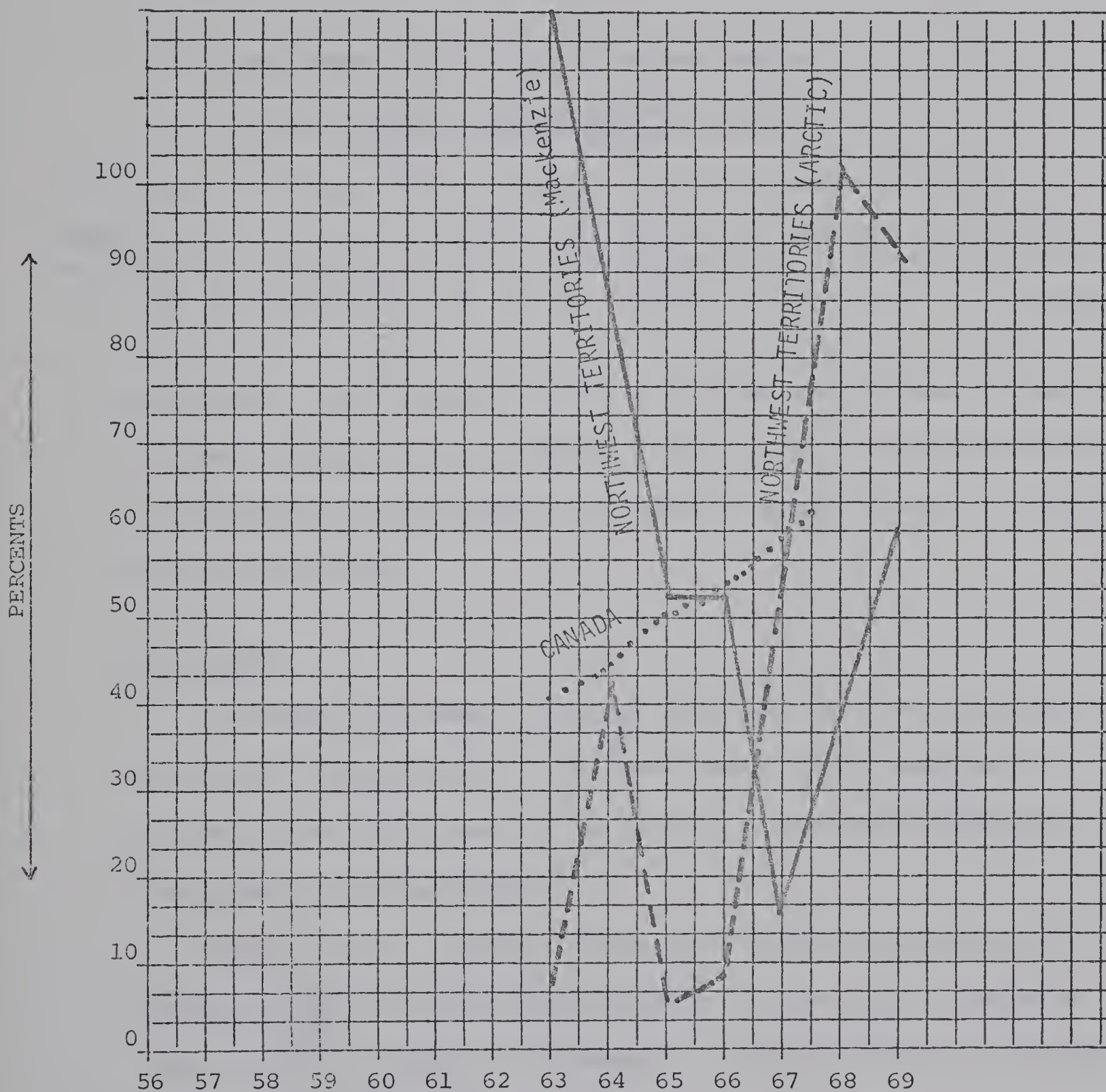
	1963-64 ¹	1964-65 ¹	1965-66 ¹	1966-67 ²	1967-68 ³	1968-69 ⁴	1969-70 ⁴
MACKENZIE							
(1) Total Enrolment	230	161	106	110	30	77	118
(2) Population of Age 5	172	182	194	202	197	189	196
(3) Enrolment Ratio							
(1) ÷ (2) Percentage	133	88	54	54	15	40	60
ARCTIC							
(1) Total Enrolment	24	157	15	35	230	428	400
(2) Population of Age 5	349	357	396	408	392	405	452
(3) Enrolment Ratio							
(1) ÷ (2) Percentage	7	43	4	8	58	104	93
TOTAL NORTHWEST TERRITORIES	254	318	121	145	260	769	904
MACKENZIE							
(1) Total Enrolment	840	855	1,058	1,046	1,209	238	258
(2) Population of Age 6	164	171	180	193	200	196	188
(3) Enrolment Ratio							
(1) ÷ (2) Percentage	512	500	587	542	604	121	137
ARCTIC							
(1) Total Enrolment	466	369	548	687	551	391	483
(2) Population of Age 6	298	321	353	390	402	386	399
Enrolment Ratio							
(1) ÷ (2) Percentage	156	111	155	176	137	101	121
TOTAL NORTHWEST TERRITORIES ¹	1,326	1,224	1,606	1,733	1,760	1,372	1,552

TABLE 4B (Continued)

- Sources:
1. Department of Northern Affairs and National Resources, Education Review, 1963-64, 1964-65, Catalogue No. R71-4, Ottawa: Queen's Printer, 1964, 1965, pp. 48-49 (1963-64) and pp. 42-43 (1964-65); Department of Indian Affairs and Northern Development, Education Review, 1965-66, Catalogue No. R71-4, Ottawa: Queen's Printer, 1966, pp. 47-48.
 2. Department of Indian Affairs and Northern Development, Annual Report, 1966-67, Ottawa: Queen's Printer, 1967, pp. 119-120.
 3. Government of the Northwest Territories, op. cit., 1967-68, p. 50.
 4. Dominion Bureau of Statistics, Preliminary Statistics of Education 1969-70, Catalogue No. 81-201, Ottawa: Queen's Printer, 1970, pp. 18-21.

FIGURE 4

ENROLMENT RATIOS FOR KINDERGARTEN
CANADA AND THE NORTHWEST TERRITORIES
(1965 - 1969)



Sources: Tables 4A & 4B.

other six-year olds may still be in kindergarten or have advanced beyond grade one. As well, five-year old and seven-year old (or older) children may be enrolled in grade one.

Age-Grade Distribution Of Eskimo Pupils

As Of January 1967¹

GRADE	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	TOTAL
I	70	355	334	187	95	45	27	27	27	17	9	11	1			1,178

Accordingly, the fact that the ratio of grade one students to the six-year old population is greater than 100% is a reflection of the net difference in the number of children in grade one who are other than six-year olds.

a) Canada

In Canada, the number of births increased from the beginning of the 1940's, almost doubled in the next twenty years, reached a plateau in the latter part of the 1950's and the early 1960's, and then began to decline sharply.

Figure 5 gives a graphic portrayal of grade one enrolment as a function of the live birth data six years earlier, for a period of twelve years. In 1965-66, for example, grade one enrolment amounted to 113% of the six-year old population.

-
1. D.W. Simpson, D.K.F. Wattie & others, The Role and Impact of the Educational Programme in the Process of Change in Canadian Eskimo Communities. Edmonton: The University of Alberta, Boreal Institute, 1968, Appendix D.

TABLE 5

GRADE ONE ENROLMENT AND LIVE-BIRTHS OF SIX YEARS EARLIER

NORTHWEST TERRITORIES

(1963 - 1970)

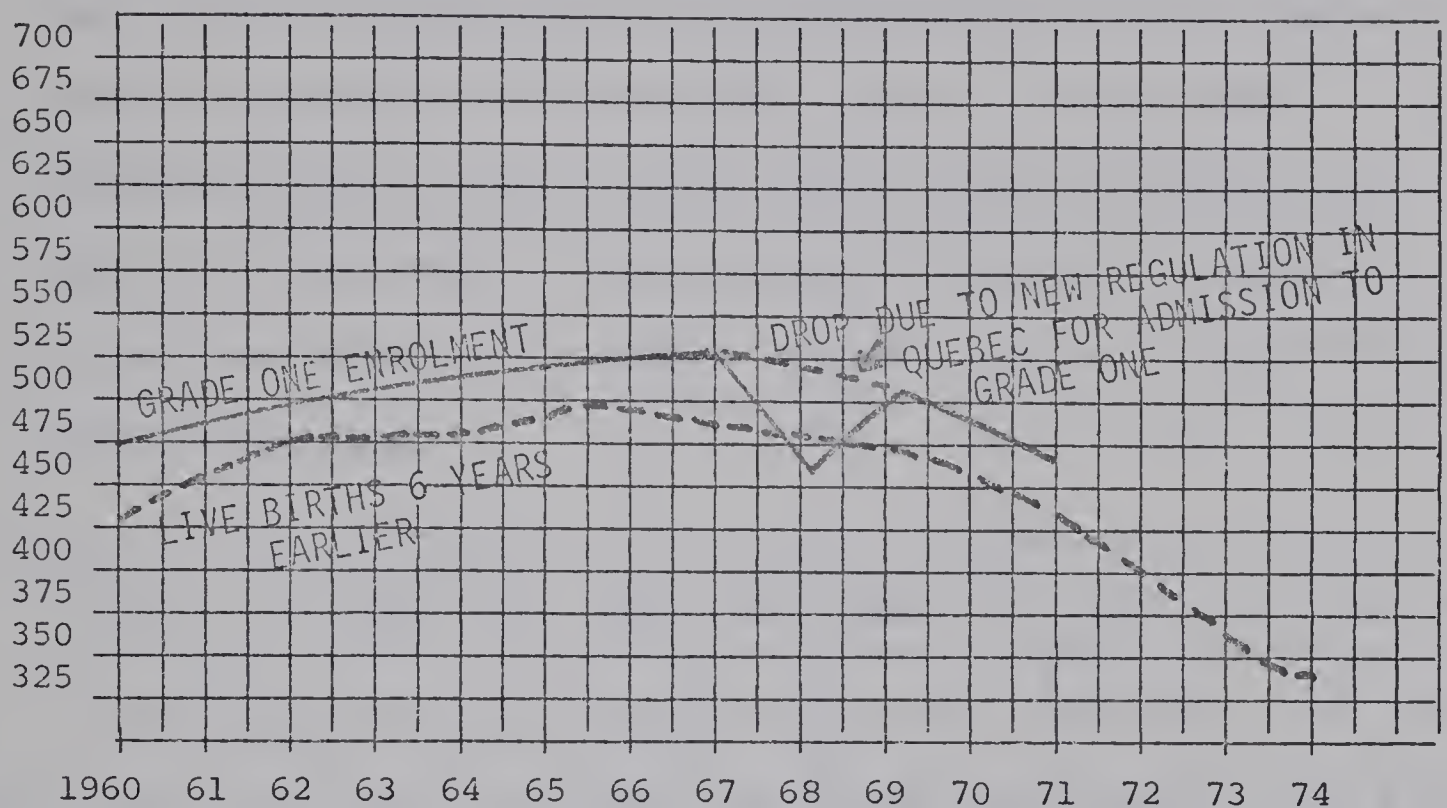
	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
Grade 1	1,326	1,224	1,606	1,733	1,760	1,372	1,552
Births (6 Years Earlier)	900	945	990	1,094	1,117	1,134	1,161

Sources: Tables 6A and 6B.

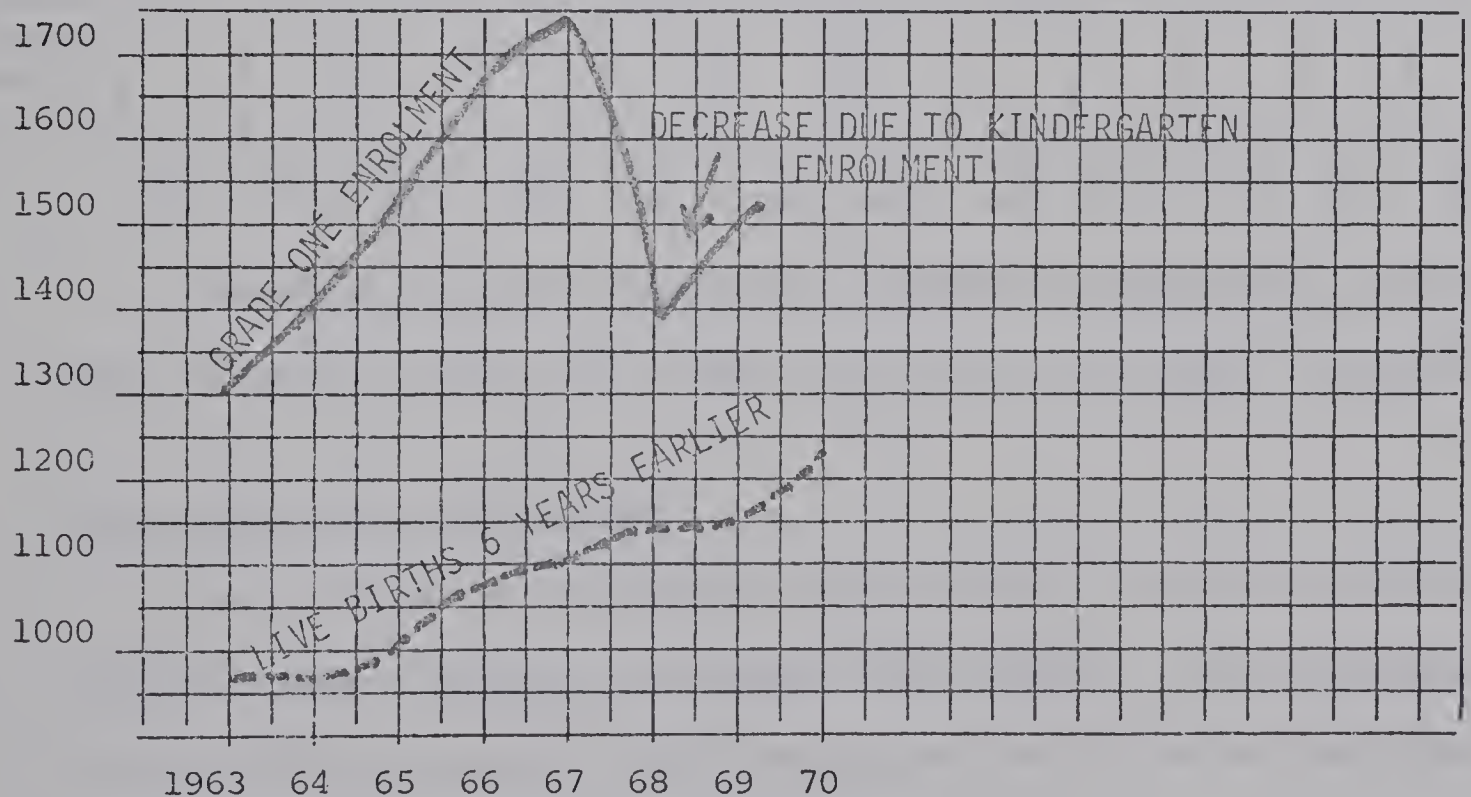
FIGURE 5

GRADE ONE ENROLMENT AND LIVE-BIRTHS OF SIX-YEARS EARLIER

A. CANADA



B. NORTHWEST TERRITORIES



Sources: A. CANADA: Dominion Bureau of Statistics, Advanced Statistics of Education 1970-71, Catalogue No. 81-220, Ottawa: Queen's Printer, 1970, p. 8.

B. NORTHWEST TERRITORIES: Table 5.

b) Northwest Territories

In contrast to the Canadian pattern, the number of births has been increasing continually in the Northwest Territories (Table 4B presents population of 6 year olds). Figure 5, which gives enrolment figures, shows that the drop in grade one enrolment in 1968-69 was the result of the increase in kindergarten enrolment. By the above figures, it is shown that the drop-out or retardation rate was very high.

	1963 - 64		1964 - 65		1965 - 66		1966 - 67		1967 - 68		1968 - 69 ¹	
	McK.	Arct.	McK.	Arct.	McK.	Arct.	McK.	Arct.	McK.	Arct.	McK.	Arct.
Grade I	870	501	931	556	969	468	1046	687	1209	551	952	420
Grade II (1 year later)	586	260	582	251	616	254	695	317	764	356	760	420
	67%	52%	62%	45%	63%	54%	66%	46%	62%	64%	79%	95%

Pre-school facilitate adaptation to school; consequently, retardation or drop-out rates from grade one to grade two ought to decline.

IV. Step Four: Grade Ratio

The technique of calculating grade ratios in order to project school enrolment figures has already been advanced. The calculation of grade ratios proceeds with knowledge of the following characteristics (past and present) of the population:

1. Tables 6A and 6B.

TABLE 6A
GRADE ENROLMENTS
ARCTIC - NORTHWEST TERRITORIES
(1963 - 1970)

GRADES	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70 ⁴
1.	466	380	568				
2. I			568	687			
3.				687	551	420	520
1.	232	283	273				
2. II			273	254			
3.				254	317	356	400
1.	187	198	236				
2. III			236	273			
3.				273	262	265	290
1.	109	122	169	217			
2. IV			169	217			
3.				217	235	358	290
1.	70	54	79	117			
2. V			79	117			
3.				117	141	203	210
1.	32	29	44	57			
2. VI			44	57			
3.				57	98	125	130
1.	14	7	9	21			
2. VII			9	21			
3.				21	27	36	40
1.	6	3	6	8			
2. VIII			6	8			
3.				8	8	16	15
1.	3	2	3	3			
2. IX			3	3			
3.				3	5	7	5
1.	3	2	1	4			
2. X			1	4			
3.				4	3	1	
1.		1					
2. XI							
3.							
1.							
2. XII							
3.							

TABLE 6A (Continued)

GRADES	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70 ⁴
1.	24	157	15	35			
2. Pre-			15	35			
3. School				35	230	460	430
1. Churchill	1	105	157	150			
2. Vocational			157	150			
3. Training				150	206	207	191
1. Duke of Edinburgh		49	37				429

- Sources:
1. Department of Northern Affairs and National Resources, op. cit., 1963-64, 1964-65; and Department of Indian Affairs and Northern Development, Education Review 1966-67, Catalogue No. R71-4, Ottawa: Queen's Printer, 1968, pp. 48-49 (1963-64), p. 42 (1964-65), p. 46 (1965-66).
 2. Department of Indian Affairs and Northern Development, Annual Report 1965-66 and 1966-67, Ottawa: Queen's Printer, 1966 and 1967, p. 112 (1965-66), p. 120 (1966-67).
 3. Government of the Northwest Territories, op. cit., 1966-67 and 1967-68, p. 77 (1966-67) and p. 50 (1967-68).
 4. Dominion Bureau of Statistics, Preliminary Statistics of Education, 1969-70, Catalogue No. 81-201, Ottawa: Queen's Printer, 1971.

TABLE 6B

GRADE ENROLMENTS

MCKENZIE - NORTHWEST TERRITORIES

(1963 - 1970)

GRADES	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
1.	840	855	1,058	1,046			
2. I			1,058	1,046			
3.				1,046	1,209	952	1,032
1.	593	600	607	616			
2. II			607	616			
3.				616	695	764	760
1.	520	592	570	566			
2. III			570	566			
3.				566	639	712	776
1.	450	514	505	562			
2. IV			505	562			
3.				562	581	681	665
1.	403	475	427	480			
2. V			427	480			
3.				480	564	542	663
1.	327	349	377	400			
2. VI			377	400			
3.				400	450	522	479
1.	287	292	307	374			
2. VII			307	374			
3.				374	406	399	475
1.	174	226	225	266			
2. VIII			225	266			
3.				266	315	357	403
1.	162	182	180	209			
2. IX			180	209			
3.				209	264	249	307
1.	126	129	171	188			
2. X			171	188			
3.				188	215	206	267
1.	98	106	122	158			
2. XI			122	158			
3.				158	160	175	175
1.	60	89	83	112			
2. XII			83	112			
3.				112	140	156	179
1. Pre-	230	161	106	110			
2. School			106	110			
3.				110	30	309	474

TABLE 6B (Continued)

GRADES	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
1. Vocational	111	113	120	130			
2. Training			120	130			
3.				130	69	96	

- Sources:
1. Department of Northern Affairs and National Resources, op. cit., 1963-64, 1964-65; and Department of Indian Affairs and Northern Development, Education Review, 1966-67, Catalogue No. R71-4, Ottawa: Queen's Printer, 1968, p. 49 (1963-64), p. 43 (1964-65), p. 47 (1966-67).
 2. Department of Indian Affairs and Northern Development, Annual Report, 1965-66, 1966-67, Ottawa: Queen's Printer, 1966, 1967, p. 112 (1965-66) and p. 119 (1966-67).
 3. Government of the Northwest Territories, op. cit., 1966-67, 1967-68, p. 77 (1966-67) and p. 50 (1967-68).

- (1) total population and total enrolment;
- (2) enrolment by age and ethnic group;
- (3) enrolment by elementary and secondary school; and
- (4) retention rate.

1. Total Population And Total Enrolment

In Step One, it was noted that the Northwest Territories population is younger than the Canadian one, and that the population growth rate in the Northwest Territories is higher than the Canadian growth rate owing to the higher birth rates in the Northwest Territories. Because of these different underlying factors, a gross comparison of school enrolment figures in the two geographic areas is meaningless. Adjustment of the figures is necessary. Differences in growth in population and in school enrolment can be comprehended by calculating the growth in participation. The growth in participation can be deduced by subtracting the growth index of enrolment from the growth index of population (See Table 7A and 7B). If these data are plotted (Figure 6), it is easy to see that school participation in Canada increased at a slower rate than in the Northwest Territories. This is easily explained by the fact that the proportion of the school-age population enrolled in the Northwest Territories is smaller than in Canada. (See Table 8). Table 8 shows that 13% of the school age population of the Northwest Territories still did not go to school in 1966-67. This allows a margin for the Northwest Territories participation rate to increase. (See Figure 7.)

TABLE 7A
POPULATION AND SCHOOL ENROLMENT
CANADA
(1957 - 1970)

	A	B	C	D	E
YEAR	ENROLMENT ¹	GROWTH INDEX	POPULATION ²	GROWTH INDEX	GROWTH IN PART (B - D)
1957-58	3,738,900	100	16,610,000	100	0
1958-59	3,945,900	105	17,080,000	102	3
1959-60	4,138,000	110	17,483,000	105	5
1960-61	4,346,600	116	17,870,000	107	9
1961-62	4,569,800	122	18,238,000	109	13
1962-63	4,765,500	127	18,583,000	111	16
1963-64	4,980,100	133	18,931,000	113	20
1964-65	5,190,300	138	19,291,000	116	22
1965-66	5,379,500	143	19,644,000	118	25
1966-67	---	--	20,015,000	120	--
1967-68	5,833,400	156	20,405,000	122	34
1968-69	5,994,778	160	20,744,000	124	36
1969-70	6,181,361	161	21,061,000	126	39

- Sources: 1. Dominion Bureau of Statistics, Student Progress Through The Schools by Grade, 1960, Catalogue No. 81-513, Ottawa: Queen's Printer, 1960, p. 25 for 1957 to 1966; and Dominion Bureau of Statistics, Advanced Statistics of Education, 1967-68 and 1970-71, Catalogue No. 81-220, Ottawa: Queen's Printer 1969, 1970, p. 5 (1969) and p. 26 (1970).
2. Dominion Bureau of Statistics, Vital Statistics 1968, Catalogue No. 84-202, Ottawa: Queen's Printer, 1970, p. 43.

TABLE 7B
POPULATION AND SCHOOL ENROLMENT
NORTHWEST TERRITORIES
(1957 - 1970)

YEAR	ENROLMENT ¹	GROWTH INDEX	POPULATION ²	GROWTH INDEX	GROWTH IN PARTICIPATION
1957-58	3,404	100	19,000	100	
1958-59	3,439	101	20,000	105	4
1959-60	4,092	120	21,500	113	7
1960-61	4,403	129	22,250	117	12
1961-62	4,828	141	22,998	121	20
1962-63	5,292	155	24,100	126	20
1963-64	5,485	161	25,250	132	29
1964-65	5,918	173	26,400	138	35
1965-66	6,504	191	27,600	145	36
1966-67	7,043	206	28,738	151	55
1967-68	7,820	229	29,243	153	76
1968-69	8,474	248	30,304	159	89
1969-70	9,032	265	31,283	164	101

- Sources: 1. Department of Northern Affairs and National Resources, Annual Report, 1958-59, 1959-60, Ottawa: Queen's Printer, 1959, 1960, pp. 81-82 (1958-59), p. 96-97 (1959-60); and Government of the Northwest Territories, op. cit., 1960-61, 1961-62, 1962-63, 1963-64, 1964-65, 1965-66, 1966-67, 1969, 1970, p. 19 (1960-61), p. 21 (1961-62), p. 24 (1962-63), p. 10 (1963-64), p. 15 (1964-65), p. 13 (1965-66), p. 65 (1966-67), p. 53 (1969), p. 105 (1970).
2. Dominion Bureau of Statistics, Census of Canada, Catalogue No. 99-511, Bulletin 7, 1-1, Census of Canada, Catalogue No. 92-606 Vol. I (1-6), Ottawa: Queen's Printer, 1961, 1962, 1963, 1964, 1965, and 1966; and Dominion Bureau of Statistics, Vital Statistics, 1966, Catalogue No. 34-202, Ottawa: Queen's Printer, 1967, p. 43.

TABLE 8

PROGRESS IN SCHOOL ENROLMENT

CANADA AND THE NORTHWEST TERRITORIES

(1950 - 1967)

	1950-51	1955-56	1960-61	1961-62	1963-64	1964-65	1965-66	1966-67
NORTHWEST TERRITORIES ¹								
Enrolment		2,018	5,170	5,474	6,236	6,730	--	7,767
School Age (6-16)	5,118	--	6,341	6,669	6,676	7,186	--	7,877
In-School (Age)	1,183	487	4,430	4,990	5,593	5,986	--	6,856
Percent In School	23	17	70	75	82	83	--	87
CANADA ²								
Percent In								
Elementary School	95.9	97.7	97.6	97.5	99.1	100.3	101.6	
Percent In								
Secondary School	46.3	53.5	63.0	71.4	76.6	78.2	79.6	
PERCENT IN SCHOOL BY ETHNIC GROUPS (NORTHWEST TERRITORIES)								
Eskimos	8	--	53	59	75	76	--	83
Indians	36	--	77	80	72	75	--	79
Others	38	--	91	95	99	99	--	97

Sources: 1. Department of Northern Development and National Resources, Annual Report, 1960-61, 1961-62, 1963-64, 1967-68, Ottawa: Queen's Printer, 1961-1962, 1964, 1968, p. 87 (1960-61), p. 87 (1961-62), p. 37 (1963-64), p. 15 (1967-68); and Department of Northern Affairs and National Resources, Education Review, 1963-64, 1964-65, Catalogue No. R71-4, Ottawa: Queen's Printer, 1964, 1966, p. 45 (1963-64), p. 17 (1964-65).

TABLE 8 (Continued)

2. Illing and Zsigmond, op. cit., pp. 127-128.

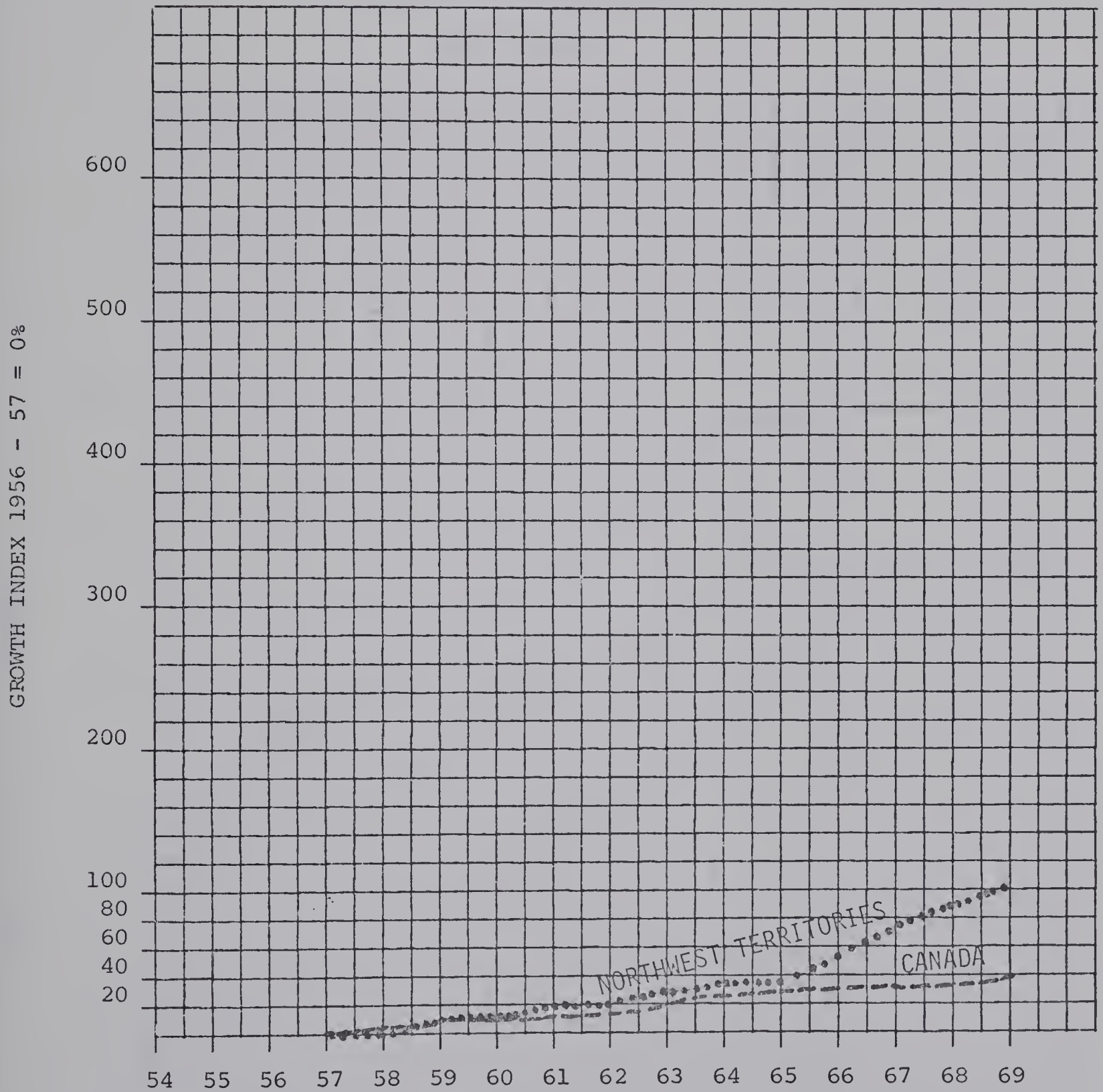
FIGURE 6

GROWTH IN SCHOOL PARTICIPATION

(i.e. GROWTH IN POPULATION - GROWTH IN ENROLMENT)

CANADA AND THE NORTHWEST TERRITORIES

(1956 - 1957 TO 1970 - 1971)



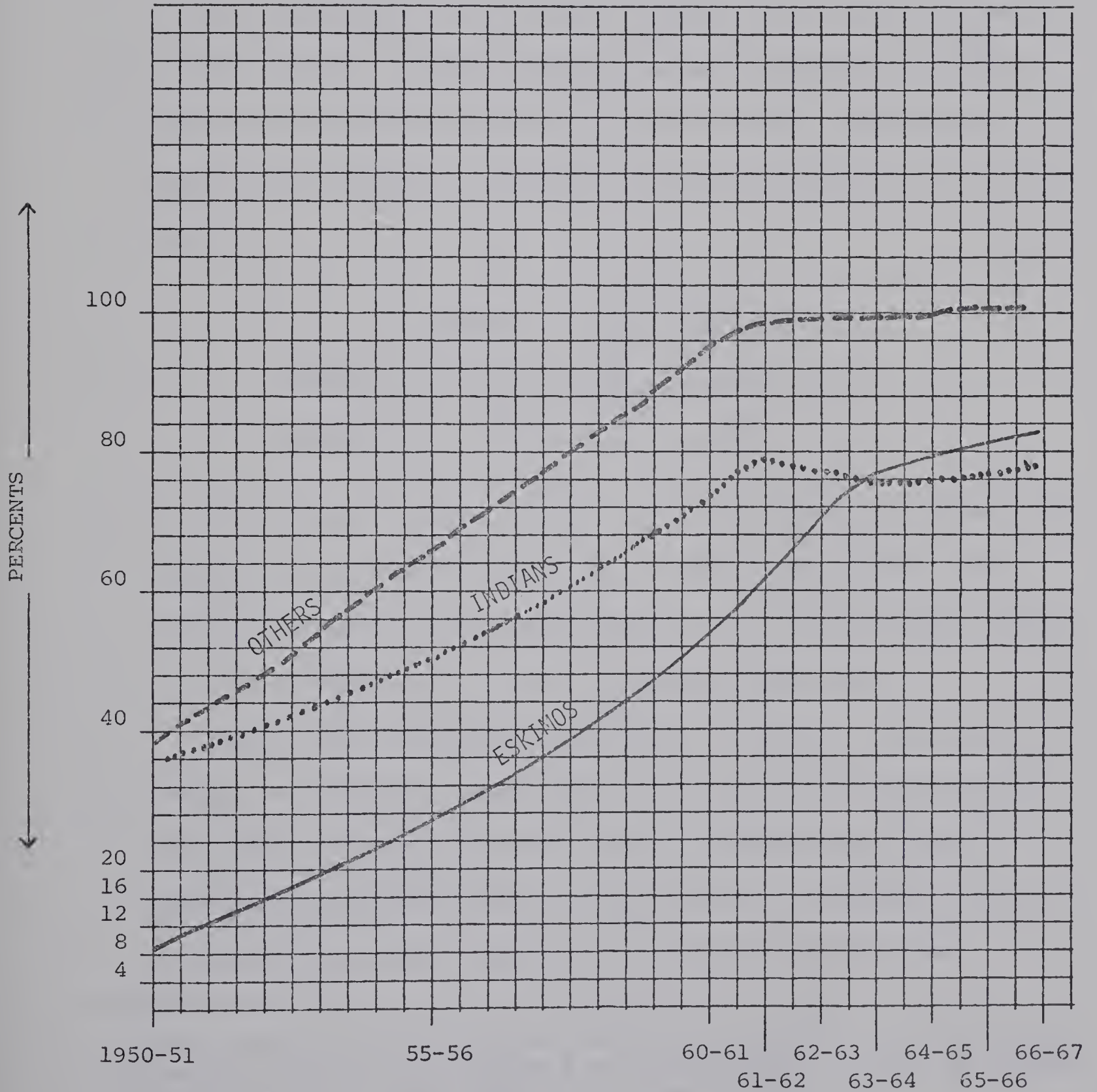
Sources: Tables 7A and 7B.

FIGURE 7

PROGRESS IN SCHOOL ENROLMENT BY ETHNIC GROUP

NORTHWEST TERRITORIES

(1950 - 1967)



Source: Table 8.

2. Enrolment By Age And Ethnic Group

A breakdown of past total school enrolment figures by ethnic group allows one to get the progress in school enrolment of the different ethnic groups - Indians, Eskimos and others (Table 9 and Figure 8)¹. Table 8 and Figure 7 demonstrate that the proportion of school-age population enrolled in school has differed according to ethnic group. Eskimo participation has increased at a faster pace than Indian participation so that the school participation of Eskimos is now greater than that of Indians, whereas it was less in 1950-51.

	1950 - 51	1966 - 67
Eskimo	8%	83%
Indians	36%	79%

The ethnic group labelled "others" can be considered to behave with respect to school participation as a Canadian population. The different levels of school participation of different ethnic groups is of great importance in school enrolment projections.

Chapter Two delineated three types of schools: territorial, company, and district. Enrolment figures will be presented separately for each type of school. Table 11 shows that "others" constitute the majority group in the district and company schools, while the three ethnic groups are evenly distributed in the

1. Table 9 shows how different the figures are according to the sources. Therefore, Table 10 and Figure 8 are computed only to give an approximation of ethnic group school population by district.

FIGURE 8

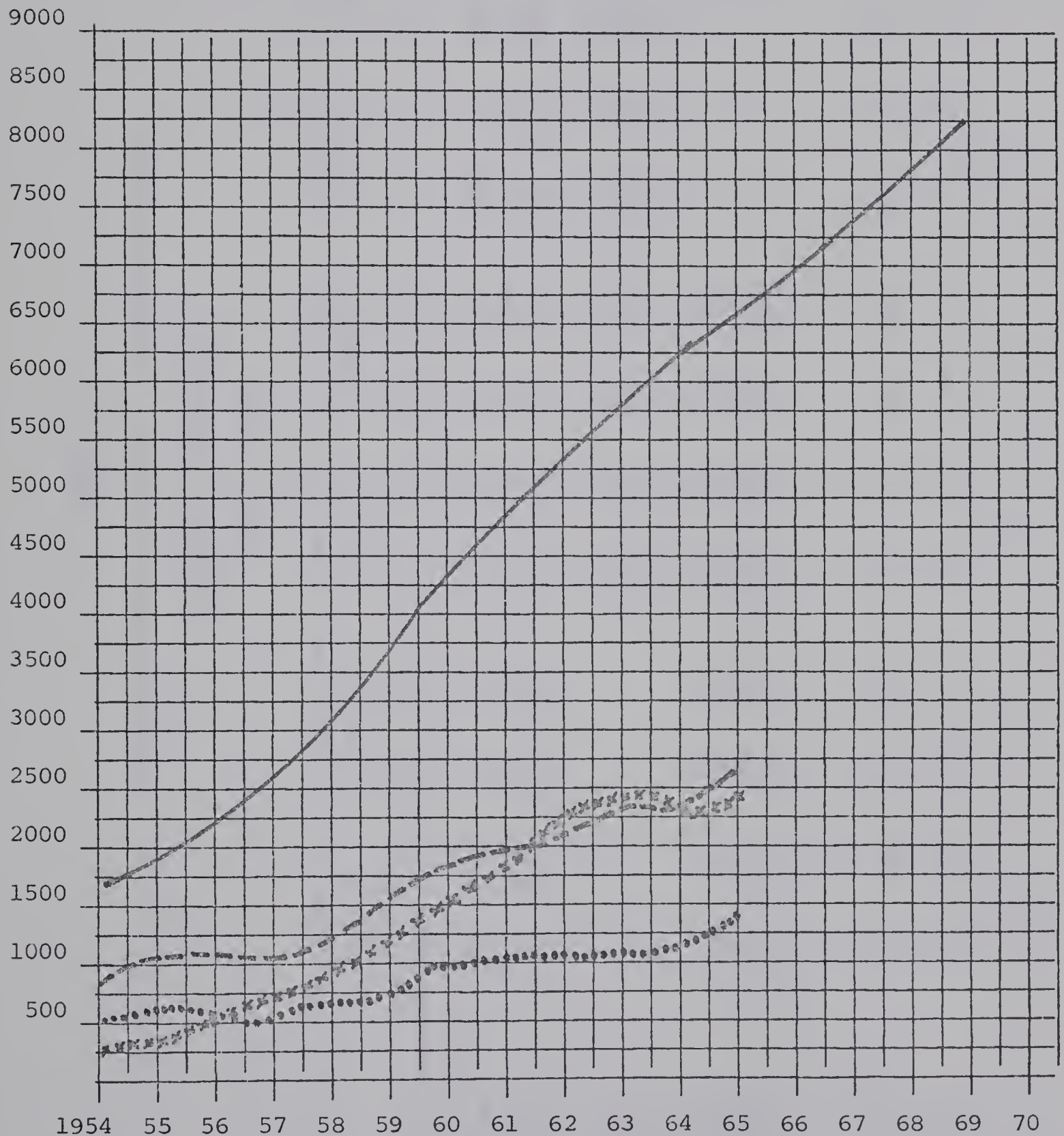
SCHOOL ENROLMENT BY ETHNIC GROUP

NORTHWEST TERRITORIES

(1954 - 1970)

LEGEND

TOTAL - ———
ESKIMOS - x x x x x
INDIANS -
OTHERS - - - - -



Source: Table 9.

TABLE 9

SCHOOL ENROLMENT ACCORDING TO SEVERAL SOURCES

NORTHWEST TERRITORIES

(1963 - 1970)

		1963-64		1964-65		1965-66		1966-67		1967-68		1968-69		1969-70	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F
Mackenzie N.W.T.															
1.	Eskimo	394	424	386	406	459	475	490	490	526	524	594	568		
	Indian	552	594	610	659	599	681	613	678	713	773	706	800		
	Other	1288	1133	1393	1229	1456	1321	1030	960	1698	1503	1840	1612		
2.	Eskimo					454	437	493	494	526	524	587	570		
	Indian					574	670	636	704	713	723	755	813		
	Other					1402	1321	1503	1387	1698	1503	1358	1608		
3.	Eskimo	398	425	397	421	454	437	493	494						
	Indian	579	577	599	648	574	670	636	704						
	Other	1287	1135	1396	1222	1402	1321	1503	1387						
Arctic N.W.T.															
1.	Eskimo	535	506	579	566	685	682	849	814	966	959	1111	1069		
	Indian	0	0	0	0	0	0	0	0	7	2	3	3		
	Other	37	42	45	45	55	55	86	77	75	74	78	90		

- 70 -

TABLE 9 (Continued)

		1963-64		1964-65		1965-66		1966-67		1967-68		1968-69		1969-70	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F
2.	Eskimo					718	718	849	814	966	959	1081	1040		
	Indian					0	0	0	0	7	2	0	0		
	Other					56	66	86	77	75	74	3	3		
3.	Eskimo	550	521		640	718	718	849	864						
	Indian	0	0		0	0	0	0	0						
	Other	32	44	51	50	58	66	86	77						
Arctic Quebec															
1.	Eskimo	343	334			367	356								
	Indian	19	19			22	16								
	Other	23	17			21	17								
2.	Eskimo					357	331	351	339	327	328	345	349		
	Indian					21	16	16	15	16	17	26	21		
	Other					22	13	17	11	24	19	23	12		
3.	Eskimo	307	290		337	357	331	351	289						
	Indian	21	22	38	29	21	16	16	15						
	Other	14	11	16	20	22	15	17	11						
Total															
1.	*Eskimo	1879		1937		2334		2650		2975		3342		4264	
	Indian	1146		1269		1280		1340		1495		1512		1731	
	Other	2500		2712		2890		3053		3350		3620		4296	

TABLE 9 (Continued)

	1963-64		1964-65		1965-66		1966-67		1967-68		1968-69		1969-70	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
2. Eskimo					3015		3340		3718		3972			
Indian					1281		1371		1537		1621			
Other					2884		3082		3542		3167			
3. Eskimo	2491		2772		3015		3340							
Indian	1199		1314		1281		1371							
Other	2523		2755		2884		3081							

* Excluding Arctic Quebec

Blank Spaces: Material Not Available

Sources: 1. Government of the Northwest Territories, op. cit., 1963-64, 1964-65, 1965-66, 1966-67, 1967-68, 1969, 1970, p. 10 (1963-64), p. 15 (1964-65), p. 13 (1965-66), p. 65 (1966-67), p. 53 (1969), p. 105 (1970).

2. Department of Northern Affairs and National Resources, Annual Report, 1965-66, Ottawa: Queen's Printer, 1966, p. 112 (1965-66); and Department of Indian Affairs and Northern Development, Annual Report, 1966-67, 1967-68, 1968-69, Ottawa: Queen's Printer, 1967, 1968, 1969, pp. 119-120 (1966-67), pp. 11-14 (1967-68), pp. 96-98 (1968-69).

3. Department of Northern Affairs and National Resources, Education Review, 1963-64, 1964-65, Catalogue No. R71-4, Ottawa: Queen's Printer, 1964, 1965; and Department of Indian Affairs and Northern Development, Education Review, 1965-66, 1966-67, Catalogue No. R71-4, Ottawa: Queen's Printer, 1966, 1967, pp. 49, 50 (1963-64), pp. 42-43 (1964-65), pp. 47-48 (1965-66) and pp. 25-26 (1966-67).

TABLE 10

SCHOOL ENROLMENT BY ETHNIC GROUP

NORTHWEST TERRITORIES AND ARCTIC QUEBEC

(1963 - 1969)

TOTAL NORTHWEST TERRITORIES AND ARCTIC QUEBEC

	TOTAL	ESKIMOS	INDIANS	OTHERS	% ESKIMOS	% INDIANS	% OTHERS
1963-64	6213	2491	1199	2523	40	19	41
1964-65	6841	2772	1314	2755	41	19	40
1965-66	7180	3015	1281	2884	42	19	39
1966-67	7792	3340	1371	3081	43	18	39
1967-68	8797	3718	1537	3542	42	17	41
1968-69	8760	3972	1621	3167	45	19	36

ARCTIC QUEBEC

1963-64	1812	1668	43	101	92	2	6
1964-65	2158	1954	67	137	91	3	6
1965-66	2322	2124	37	161	91	2	7
1966-67	2575	2353	31	191	91	1	8
1967-68	2814	2580	42	192	92	2	6
1968-69	2903	2815	47	41	97	2	1

MACKENZIE

1963-64	4401	823	1156	2422	19	26	55
1964-65	4683	818	1247	2618	17	27	56
1965-66	4858	891	1244	2723	18	26	56
1966-67	5217	987	1340	2890	19	26	55
1967-68	5687	1050	1436	3201	18	25	57
1968-69	5693	1159	1568	2966	20	28	52

Source: Table 9.

TABLE 11

SCHOOL ENROLMENT BY TERRITORIAL, COMPANY AND DISTRICT SCHOOLS

NORTHWEST TERRITORIES

(1960 - 1967)

	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
TERRITORIAL SCHOOLS							
Indians	1,024	1,083	1,105	1,099	1,228	1,212	1,291
Eskimos	1,397	1,633	1,802	1,879	1,932	2,328	2,643
Others	1,408	1,495	1,556	1,668	1,827	1,976	2,106
	<u>3,829</u>	<u>4,211</u>	<u>4,463</u>	<u>4,646</u>	<u>4,987</u>	<u>5,516</u>	<u>6,040</u>
COMPANY SCHOOLS							
Indians	0	0	0	0	0	0	0
Eskimos	0	0	0	0	0	0	0
Others	12	14	27	10	32	42	47
	<u>12</u>	<u>14</u>	<u>27</u>	<u>10</u>	<u>32</u>	<u>42</u>	<u>47</u>
DISTRICT SCHOOLS							
Indians	27	23	43	47	41	68	49
Eskimos	0	0	0	0	5	6	7
Others	535	580	759	822	853	872	900
	<u>562</u>	<u>603</u>	<u>802</u>	<u>869</u>	<u>899</u>	<u>941</u>	<u>956</u>

TABLE 11 (Continued)

	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
TOTAL							
Indians	1,051	1,106	1,148	1,146	1,269	1,280	1,340
Eskimos	1,397	1,633	1,802	1,879	1,937	2,334	2,650
Others	1,955	2,089	2,342	2,590	2,712	2,430	3,006
	<u>4,403</u>	<u>4,828</u>	<u>5,292</u>	<u>5,525</u>	<u>5,918</u>	<u>6,054</u>	<u>7,043</u>

Source: Government of the Northwest Territories, op. cit., 1960-61 . . . 1965-66, p. 19 (1960-61), p. 21 (1961-62), p. 24 (1962-63), p. 10 (1963-64), p. 15 (1964-65) and p. 18 (1965-66).

territorial schools.

3. Enrolment By Elementary And Secondary Schools

Elementary

a) Canada

While the increase in elementary enrolment from 1951-52 to 1967-68 was accounted for almost entirely by the population upsurge, there was still an increase in the elementary school enrolment ratio from 95.9% to 101.6% over this period (See Table 12). That increment was due to higher enrolment in kindergarten and higher grades (grades 7 and 8). Nevertheless, as Figure 9 demonstrates, the scope for Canadian elementary enrolment ratios to increase is limited. Hence elementary enrolment in Canada has increased as a result of population increases and not as a result of a higher participation rate. This being the case, and because of the nature of the Canadian population growth rate, a decline in elementary school admission will eventually spread to higher grades. Table 12 shows also that elementary school admission ratios (kindergarten is excluded) exceeded 100% in 1951-52 for each province. Over the period 1951-52 to 1967-68, provincial differences were gradually reduced.

b) Northwest Territories

The pattern of elementary school enrolment in the Northwest Territories is quite different from the Canadian insofar as "more

TABLE 12

ELEMENTARY ENROLMENT RATIOS

PROVINCES, CANADA, NORTHWEST TERRITORIES

[illegible]

TABLE 12 (Continued)

LOCATION ⁽¹⁾	1951	1952	1953	1954	1955	1956	1957	1958	1960	1961	1962	1963	1964	1965	1966	1967	1968
Alberta	111																104
British Columbia	103																108 ⁽²⁾
Canada ⁽³⁾	95.9	95.9	97.1	97.6	97.2	96.6	96.8	97.1	97.9	97.8	98.3	99.0	99.8	100.2	100.1	100.2	
Northwest Territories																	
(4)					54.7	57.1	93.8	89.7	107.01	109.4	108.3	107.2	103.8	110.1	112.3	111.3	
(5)					46.4	49.4	80.4	79.2	98.6	100.3	100.0	98.3	96.3	101.3	103.9	103.9	

(1) Except where noted, enrolment in Grades 1 to 8 as 6-13 age group.

(2) Enrolment in Grades 1 to 7 related to 6-12 age group.

(3) Enrolment in Grades Kindergarten to 8 as 5-13 age group.

(4) Enrolment in Grades 1 to 8 as 6-13 age group.

(5) Enrolment in Grades 1 to 8 as 5-13 age group.

Sources: 1. Zsigmond and Wenaas, op. cit., p. 45.

2. Illing and Zsigmond, op. cit., p. 133.

3. D.W. Carr and Associated Ltd., The Yukon Economy: Its Potential for Growth and Continuity, Vol. VI, Ottawa: Queen's Printer, 1968, p. 7.

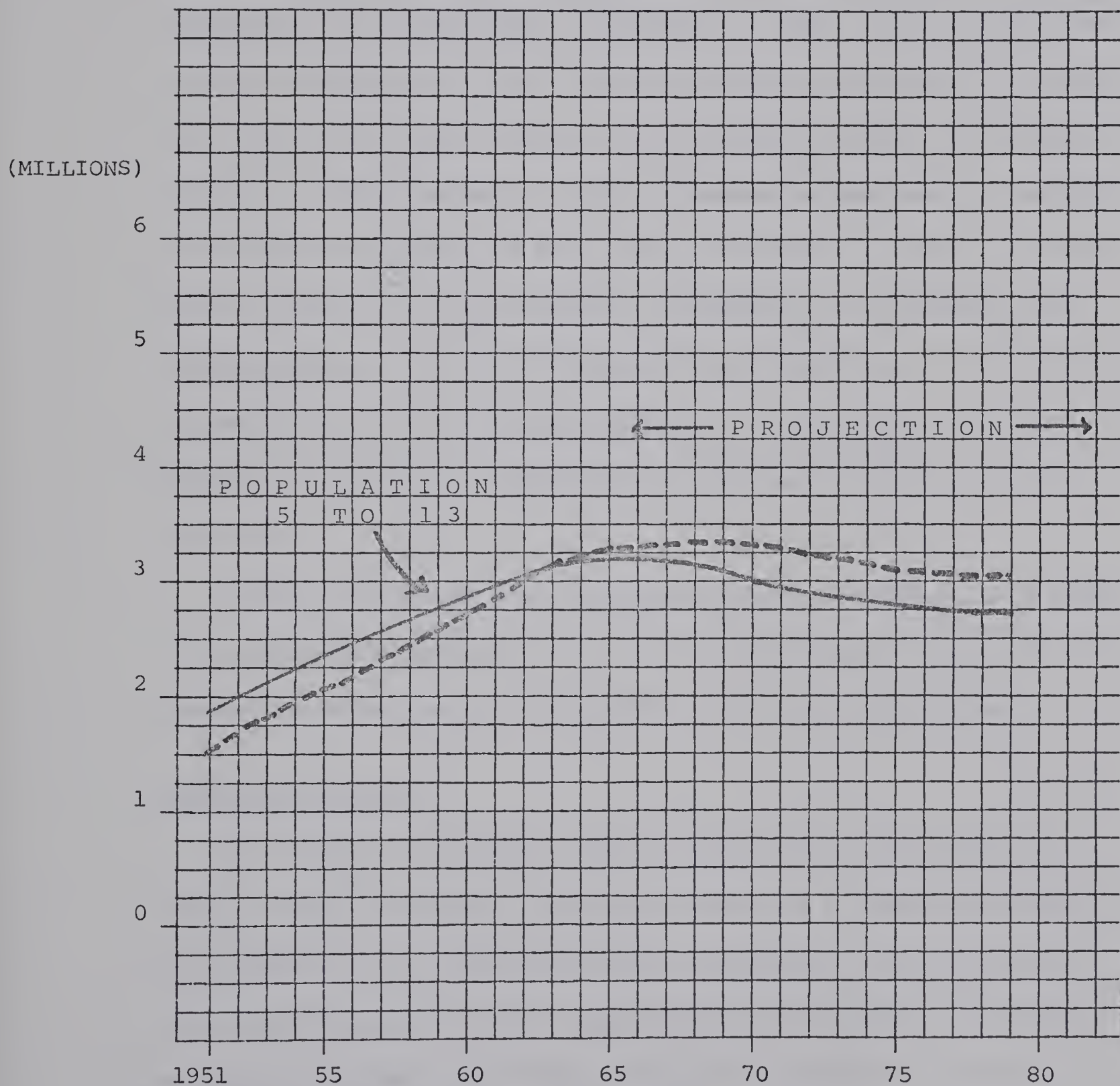
4. Tables 6A and 6B.

FIGURE 9

ELEMENTARY ENROLMENT AND RELEVANT POPULATION

CANADA

(1951 - 1980)



NOTE: Elementary enrolment in this chart includes kindergarten enrolment.

Source: Zsigmond and Wenaas, op. cit., p. 25.

than half of all people 14 years of age and over had not attended school as of January 1969"¹.

The age-ratio technique of calculating elementary and secondary school enrolment beyond kindergarten and grade one is subject to limitations in the Northwest Territories. Table 8 shows that school enrolment figures are larger than the number of attenders of school age (though, of course enrolment figures are less than the numbers eligible to attend school). This is because of enrolment of people not normally considered of school age. However, in order to get an over-all picture of the proportion of students in elementary and secondary school to the total population of school age, as well as to observe the different characteristics of the Canadian and the Northwest Territories population, the age-ratio technique will be used here.

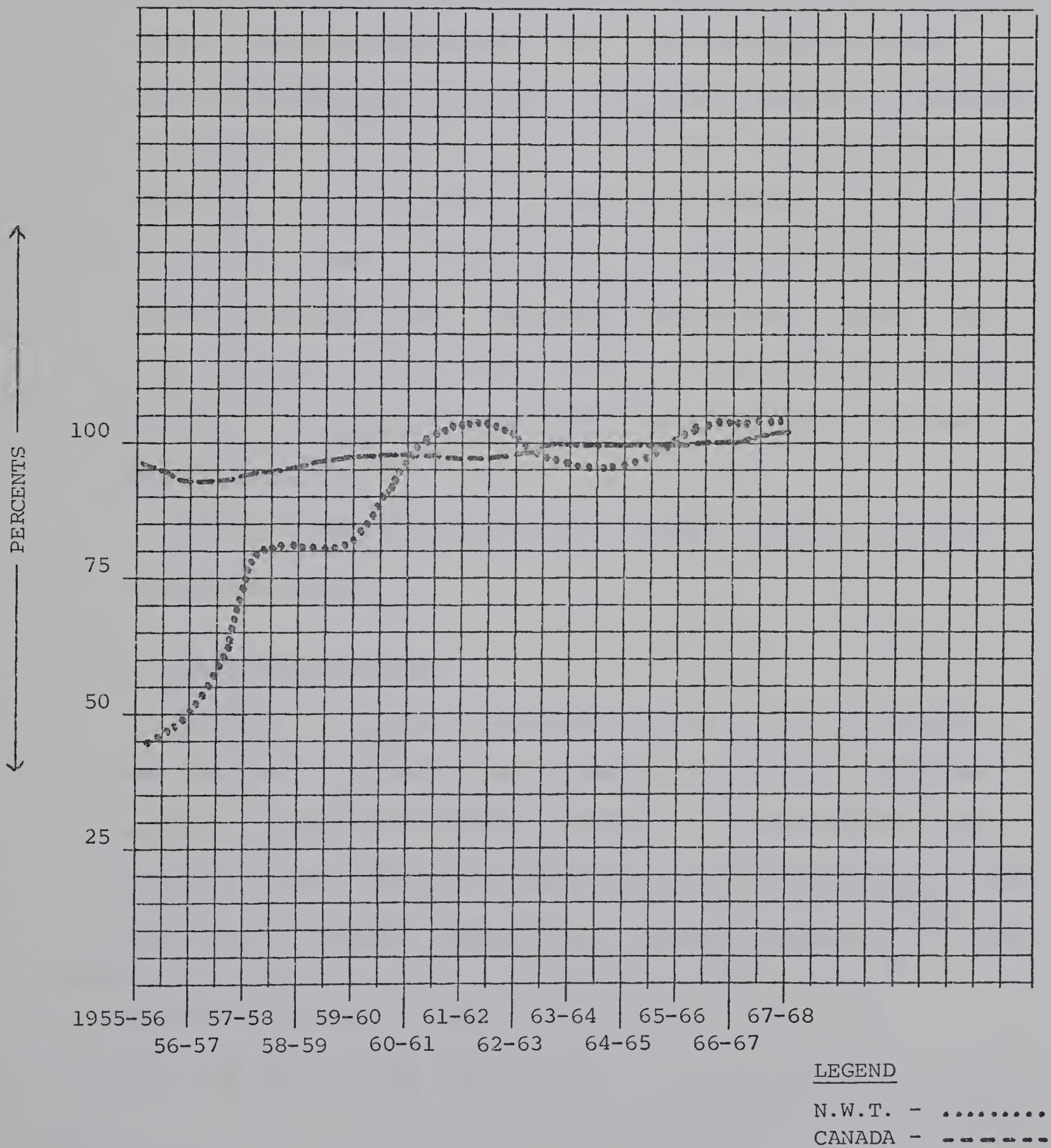
Table 12 indicates that elementary school attendance as a whole in the Northwest Territories is up to Canadian norms (See Figure 10). However, as noted earlier, attendance varies by ethnic group.

Secondary Enrolment

The category, secondary school, encompasses grades nine to twelve as well as special and other classes on a comparable level. As secondary school institutions have recognized the necessity of preparing students for other than university attendance, and have developed programmes that match students' aptitude and interests, older students have been motivated to remain in school. Accord-

1. Schweitzer, op. cit., p. 78.

FIGURE 10
ELEMENTARY ENROLMENT
CANADA AND THE NORTHWEST TERRITORIES
(1955 - 1968)



Source: Table 12.

ingly, secondary school enrolment ratios have increased.

a) Canada

Secondary school enrolment in Canada increased during the 1950's and the early 1960's as a result of both a growth in population and a rising participation rate. At the beginning of the 1950's, secondary school students constituted only 46% of the school age population (i.e. 46% of 14-18 age bracket). The number of secondary students increased by about 310% from 1951-52 to 1967-68¹ so that in 1965-66, the proportion of young people enrolled in secondary school was 80%. Enrolment advanced about twice as rapidly as the number in high school age groups from 1955-56 to 1965-66. The 14-17 age group population rose by about 60% while enrolment rose by almost 140%².

Table 14 shows secondary school enrolment numbers across the different provinces.

b) Northwest Territories

Efforts to integrate the educational system and the economy have resulted in a spectacular expansion of vocational education and adult education programmes in Canada. A large variety of new courses and other educational services are now being offered to the people of the Northwest Territories. Because the expansion has been

1. Zsigmond and Wenaas, op. cit., p. 15.

2. Illing and Zsigmond, op. cit., p. 28.

TABLE 13 (Continued)

LOCATION	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Canada	46.4	47.4	49.0	50.5	53.5	56.2	58.6	61.2	63.2	71.9	74.7	77.1	79.3	80.2	84.0	86.2	
Northwest Territories					10.1	7.1	32.1	24.8	27.1	33.9	39.6	45.1	44.5	58.1	53.7	56.7	

1. Except where noted, enrolment in Grades 9 to 12 related to 14 - 17 age group.
2. Enrolment in Grades 9 to 11 as % of 14 - 16 age group.
3. Enrolment in Grades 8 to 13 related to 13 - 16 age group.
4. Enrolment in Grades 9 to 13 related to 14 - 17 age group.
5. Enrolment in Grades 8 to 13 related to 13 - 17 age group.
6. Enrolment in Grades 8 to 11 related to 13 - 16 age group.

Source: 1. Zsigmond and Wenaas, op. cit., p. 45.

2. Carr, op. cit., p. 7.

3. Tables 6A and 6B.

TABLE 14

ELEMENTARY AND SECONDARY ENROLMENT

NORTHWEST TERRITORIES AND ARCTIC QUEBEC

(1958 - 1967)

	ELEMENTARY	%	SECONDARY	%
1958-59	3,226	87.4	466	12.6
1959-60	3,775	85.5	641	14.5
1960-61	4,251	85.7	710	14.3
1961-62	4,589	85.4	785	14.6
1962-63	5,078	85.1	890	14.9
1963-64	5,250	82.6	986	17.4
1964-65	5,350	82.5	1,135	17.5
1965-66	5,650	83.4	1,123	16.6
1966-67	6,010	81.7	1,354	18.3

Elementary: Grades I - VI

Secondary: Grades VII - XII

- Sources:
1. Department of Northern Affairs and National Resources, Education Review, 1963-64, Catalogue No. R71-4, Ottawa: Queen's Printer, 1964, p. 46 for 1958 to 1964.
 2. Department of Northern Affairs and National Resources, Annual Report, 1958-59 . . . 1964-65, Ottawa: Queen's Printer, 1959 to 1965, pp. 82-83 (1958-59), pp. 96-97 (1959-60), pp. 86-87 (1960-61), pp. 81-84 (1961-62), pp. 29-30 (1962-63) and p. 37 (1963-64).
 3. Department of Indian Affairs and Northern Development, Annual Report, 1964-65, 1965-66, 1966-67, Ottawa: Queen's Printer, 1965, 1966, 1967, p. 38 (1964-65), p. 112 (1965-66), pp. 119-120 (1966-67).

so recent - indeed is ongoing - it is extremely difficult to assess the future expansion of programmes (including variety and length of courses).

For purposes of analysis, secondary enrolment in the Northwest Territories is divided into the following categories: 1) usual secondary level, 2) vocational courses, and 3) adult education.

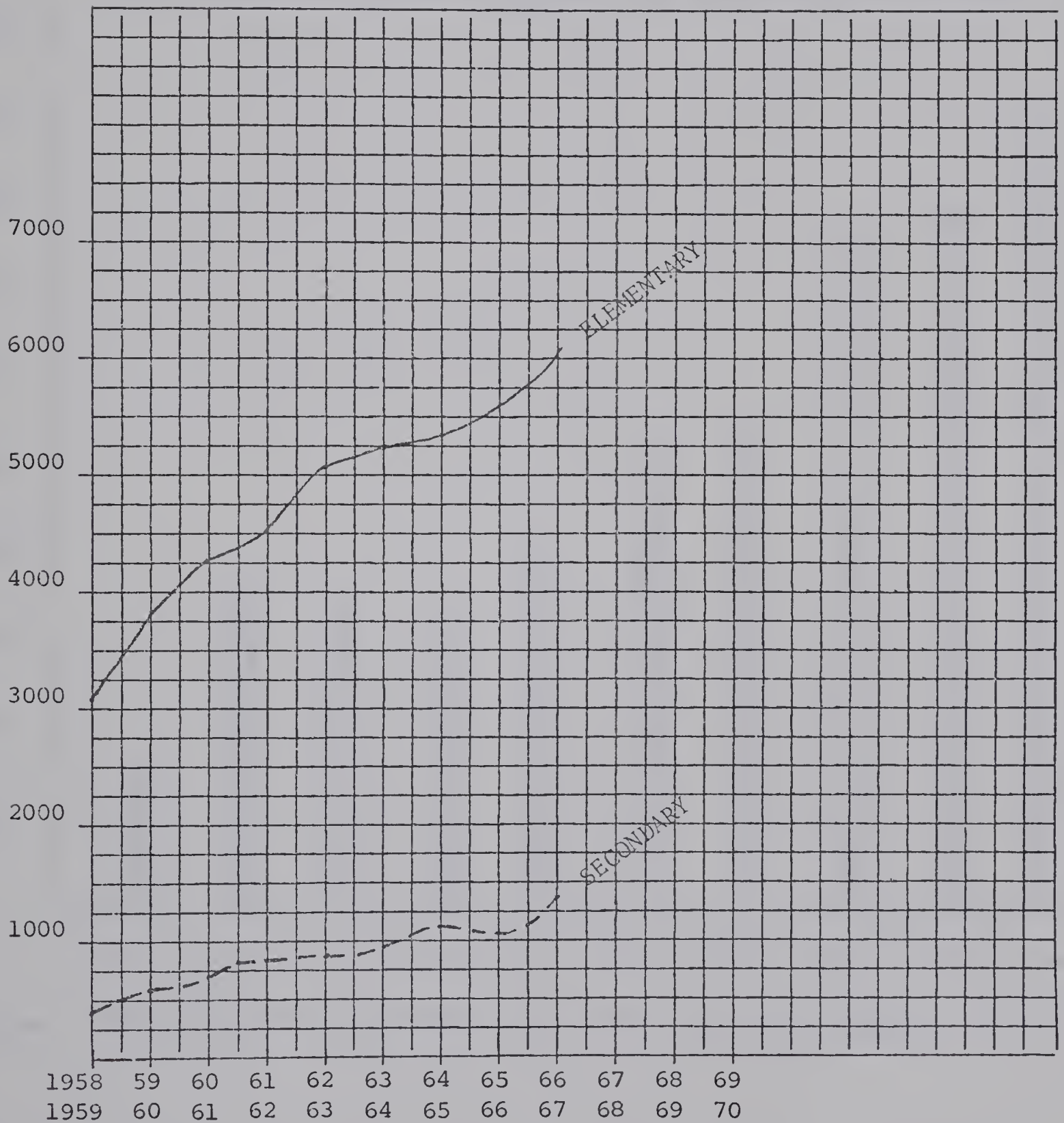
The secondary level enrolment in the Northwest Territories assumed a greater importance over the period 1958-59 to 1964-65. From comprising 12.6% of total enrolment in the former year, (1958-59) secondary students constituted 17.5% of all students by the latter one (1964-65). The increase was the result of rising participation rates at the secondary level realized alongside a high level of elementary school enrolment. (See Table 14 and Figure 11.)

Vocational training encompasses pre-vocational training, apprenticeship programmes and post-secondary non-university enrolment¹. Vocational Training enrolment figures are calculated as a proportion of the 14-21 age group.

Table 15 shows the growth of vocational training in the Northwest Territories from 1959-60 to 1968-69 by ethnic group. Over this period Eskimos have increased their participation five-fold, Indians have augmented their participation 2½ times, while that of others has doubled. Figures 12 and 13 show the complexity of past enrol-

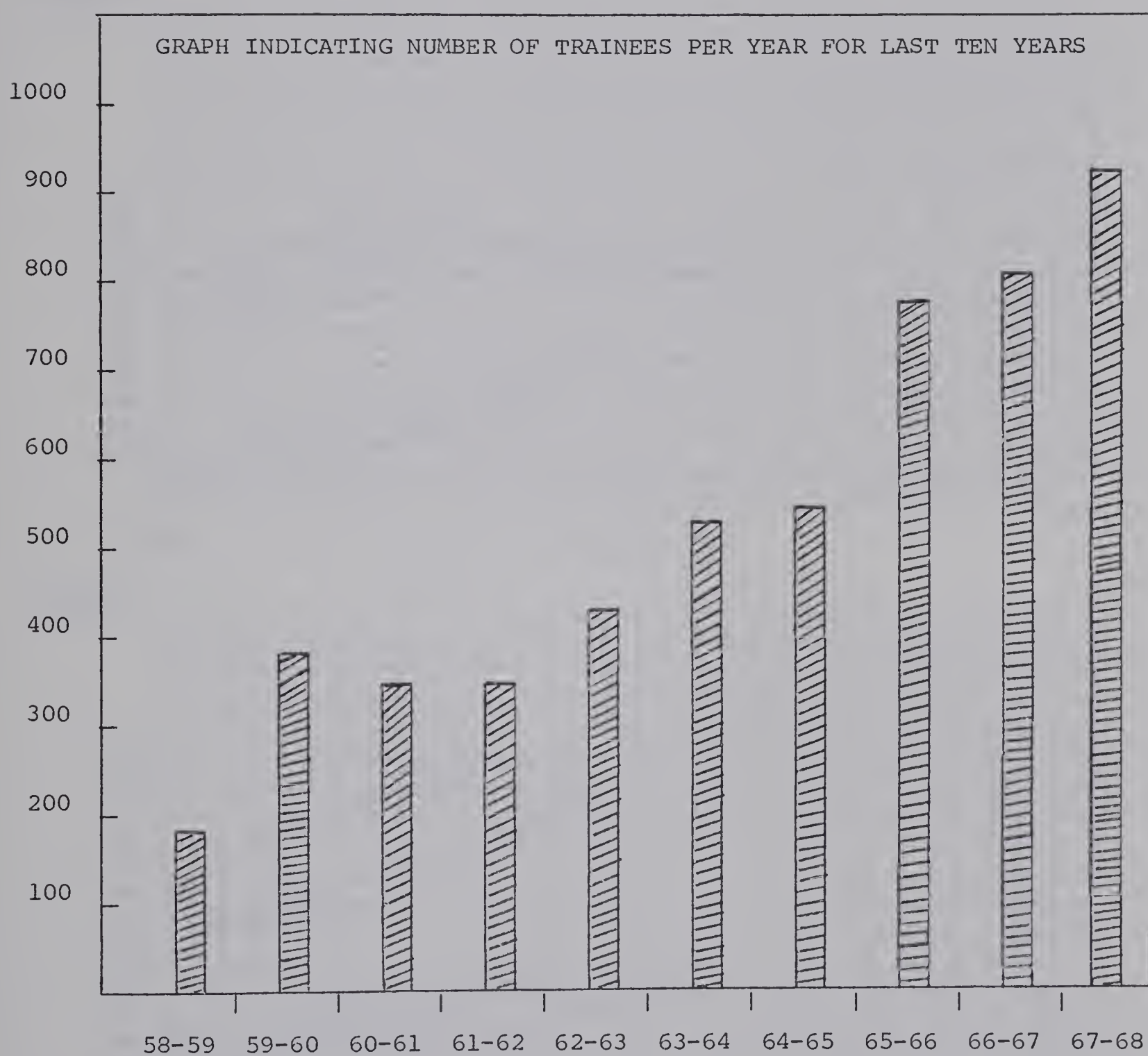
1. Dominion Bureau of Statistics, Education Division, Vocational Training Section, Survey of Vocational Education and Training 1963-64. Catalogue No. 81-209 Annual, Ottawa: Queen's Printer, 1967, p. 7.

FIGURE 11
ENROLMENT BY ELEMENTARY AND SECONDARY
(1958 - 67)
NORTHWEST TERRITORIES AND ARCTIC QUEBEC



Source: Table 14.

FIGURE 12
VOCATIONAL TRAINEES
(1958 - 68)
NORTHWEST TERRITORIES



Source: Government of the Northwest Territories, op. cit., 1967-68, p. 46.

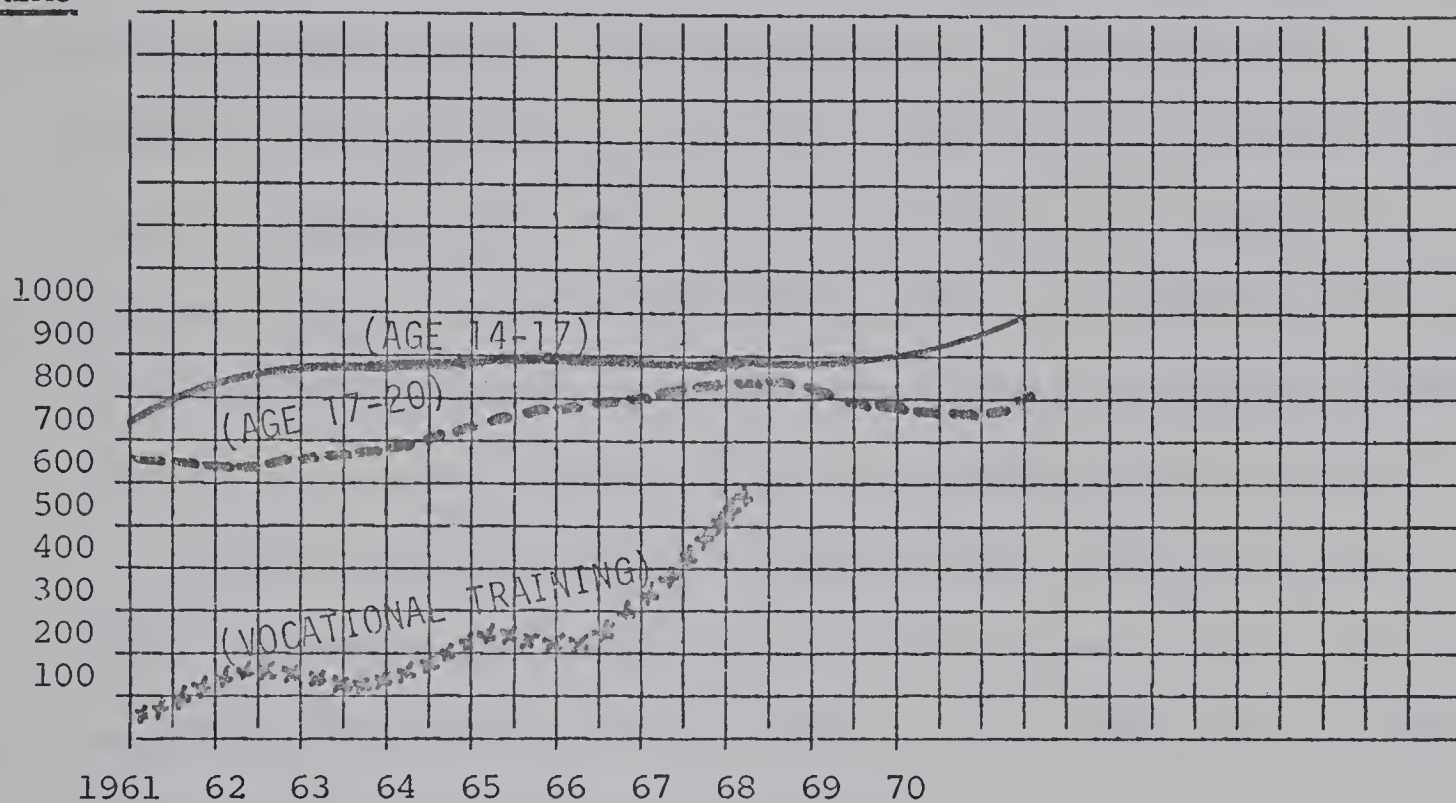
FIGURE 13

VOCATIONAL TRAINING AND POPULATION

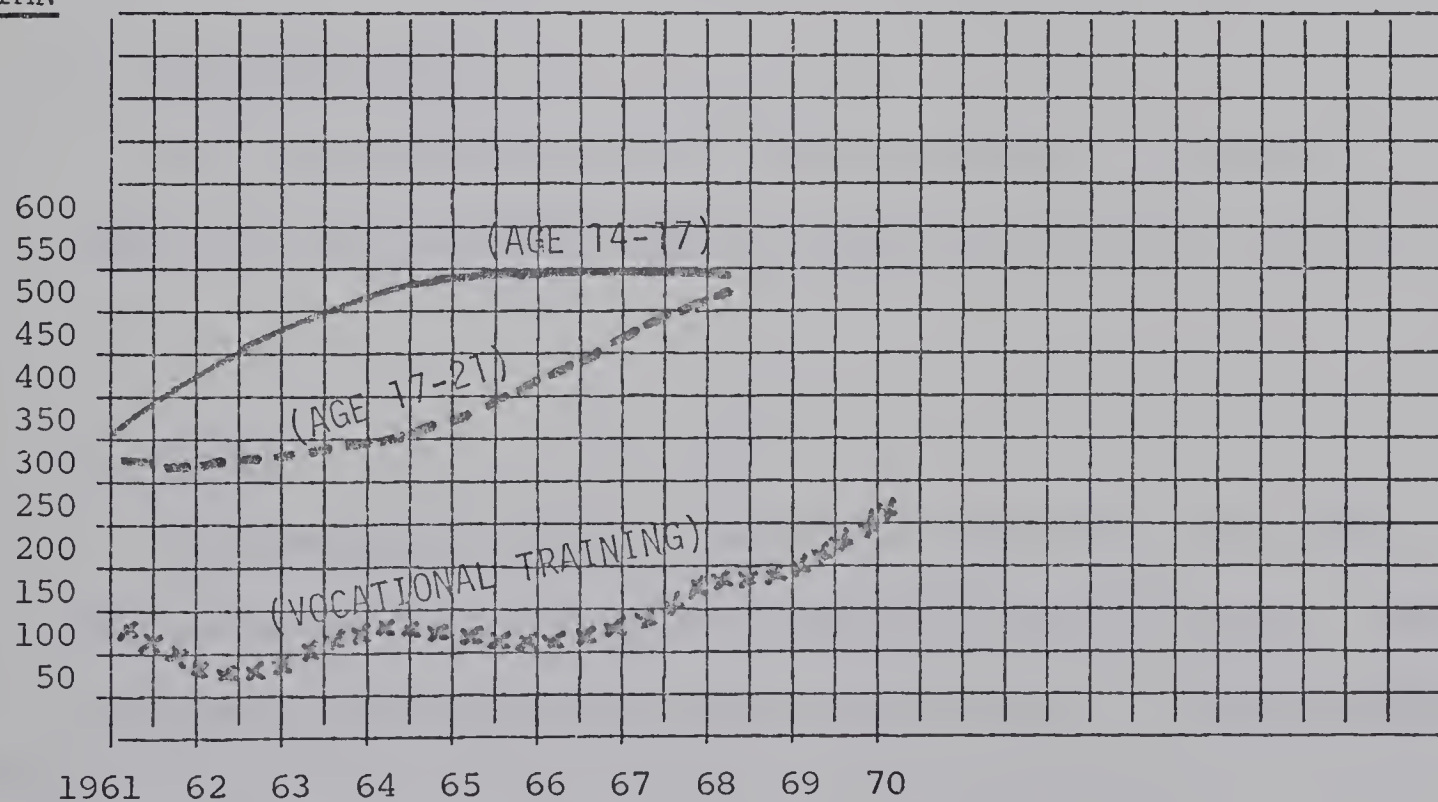
NORTHWEST TERRITORIES

(1961 - 1971)

ESKIMO



INDIAN



Source: Table 15.

ment, and portends as well the difficulty of projecting vocational school enrolment.

Adult Education is part of secondary education peculiar to the Northwest Territories. "In Southern Canada, Community Adult Education means providing educational opportunities that would allow adults to carry on from where they left off in their schooling. In Northern Canada, it has an additional task, i.e. providing functional or fundamental education to take the place of the formal schooling that the majority of Indian, Metis, and Eskimos have never had"¹.

Adult classes are mainly attended by the 21-40 age group. The 16-20 age bracket has tended not to attend unless classes have been especially organized for them. Table 16 gives some idea of adult education in the Northwest Territories.

4. Retention Rates

The retention rate refers to the percentage of students in Grade X who are retained (that is, proceed to) Grade X + 1, X + 2
....

a) Canada

With respect to Canadian educational enrolment, the 1950's were characterized by generally increasing retention rates. Table 17A presents some information on retention rates in Canadian schools².

1. "Education North of 60", op. cit., pp. 5-7.

2. Dominion Bureau of Statistics, Students Progress Through The Schools 1960, Catalogue No. 81-513, Ottawa: Queen's Printer, 1960, pp. 28-31.

TABLE 15

SUMMARY OF VOCATIONAL TRAINING

NORTHWEST TERRITORIES

(1959 - 1969)

ESKIMOS										
In The Northwest Territories ¹	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	59	53	51	94	89	94	147	150	160	400
Out Of The Northwest Territories ¹	<u>43</u>	<u>35</u>	<u>32</u>	<u>51</u>	<u>108</u>	<u>95</u>	<u>104</u>	<u>77</u>	<u>120</u>	<u>181</u>
TOTAL ¹	102	88	83	145	197	189	251	227	280	581
Increase For Each Year		-13%	-6%	+74%	+35%	-4%	+32%	-9%	+23%	+109%
Growth In 1959-60 = 100%	100	86	81	142.1	193.1	180.3	246.1	222.2	274.5	569.7
Ages: ² 14-17										
17-21			768	808	846	868	879	875	867	866
			<u>622</u>	<u>644</u>	<u>669</u>	<u>695</u>	<u>727</u>	<u>772</u>	<u>800</u>	<u>823</u>
Total 14-21			1390	1452	1515	1563	1606	1647	1667	1689
% Of 14-17			10	17	23	21	28	25	32	67
% Of 17-21			13	22	30	27	34	23	35	70

TABLE 15 (Continued)

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
% Of Total 14-21			6	9	12	12	14	12	16	34
Growth Of Population 14-21				+4%	+4%	+3%	+2%	+2%	+2%	
INDIANS										
In The Northwest Territories	92	68	89	923	89	94	113	145	154	220
Out Of The Northwest Territories	<u>27</u>	<u>18</u>	<u>9</u>	<u>9</u>	<u>14</u>	<u>6</u>	<u>27</u>	<u>22</u>	<u>30</u>	<u>43</u>
TOTAL	117	86	98	132	103	100	140	167	184	263
Growth In 1959-60 = 100%	100	72	81	110.9	86	83	117.6	140.3	146.1	221.0
Ages: 14-17										
17-21			396	441	490	530	553	564	566	566
			<u>332</u>	<u>332</u>	<u>325</u>	<u>341</u>	<u>324</u>	<u>422</u>	<u>470</u>	<u>502</u>
Total 14-21			728	763	815	871	927	986	1036	1068
% Of 14-17			13	18	12	11	16	16	17	24
% Of 17-21			29	40	31	29	37	39	39	52
% Of Total 14-21			11	15	11	10	13	14	14	19

TABLE 15 (Continued)

Sources: Compiled from:

1. Department of Indian Affairs and Northern Development, Annual Report 1968-69,
Ottawa: Queen's Printer, 1970, p. 103.
2. C. Cornelssen, op. cit.

TABLE 16
ADULT AND HIGHER EDUCATION
NORTHWEST TERRITORIES

1) ADULT EDUCATION

	TOTAL	ACADEMIC	VOCATIONAL
1963	6280	---	---
1968-69	2467 ¹	647	1,820
1969-70 ²	765	290	475

--- not available

2) HIGHER EDUCATION

YEAR	NUMBER ³
1966-67	43
1967-68	79
1968-69	105
1969-70	116
1970-71	135

- Sources:
1. Department of Indian Affairs and Northern Development, Annual Report, 1968-69, Ottawa: Queen's Printer, 1969, p. 95.
 2. Dominion Bureau of Statistics, Preliminary Statistics of Education 1969-70, Catalogue No. 81-201, Ottawa: Queen's Printer, 1971, p. 52.
 3. Northwest Territories Government, op. cit., 1966-67. . 1970.

TABLE 17A

RETENTION RATES

CANADA

(1951 - 1970)

(ELEMENTARY AND SECONDARY ENROLMENT BY GRADE IN RELATION TO THE INITIAL GRADE TWO ENROLMENT)

Year Of Grade 2 Enrol- ment	Grade 3 One Year Later	Grade 4 Two Years Later	Grade 5 Three Years Later	Grade 6 Four Years Later	Grade 7 Five Years Later	Grade 8 Six Years Later	Grade 9 Seven Years Later	Grade 10 Eight Years Later	Grade 11 Nine Years Later	Grade 12 Ten Years Later	Grade 13 Eleven Years Later	Year Of Grade 13 Enrol- ment
1951	100.6	99.9	98.3	95.2	90.6	82.5	79.0	63.2	51.3	33.1	9.5	1962
1952	100.9	99.7	98.2	94.4	91.0	84.2	80.3	65.6	55.8	34.1	10.2	1963
1953	101.0	98.9	97.8	95.0	92.0	84.3	81.2	69.9	58.0	36.1	11.8	1964
1954	100.4	98.3	97.5	94.5	91.6	85.0	82.7	70.4	59.0	38.6	11.3	1965
1956	100.7	98.9	99.2	96.7	94.2	92.1	89.2	77.8	67.9	40.7	10.8	1967
1957	100.5	99.2	99.0	97.0	94.4	92.2	88.8	79.2	70.0	42.2	11.5	1968
1958	100.5	99.0	98.3	96.1	94.6	93.0	89.5	80.4	72.0	44.5	11.9	1969
1959	100.2	98.6	98.0	95.7	94.3	92.3	89.8	81.8	74.7	47.1	12.7	1970
1960	99.6	98.0	97.1	94.9	94.3	92.3	90.0	83.6	77.2	49.5	13.5	
1961	99.8	98.5	97.6	95.7	95.0	93.8	91.1	85.7	80.2	51.4		
1962	99.7	98.4	98.2	96.3	95.5	94.7	92.5	87.7	82.8			
1963	99.3	97.9	98.0	96.7	95.3	95.1	93.1	89.0				
1964	98.7	97.6	97.7	95.7	94.7	94.6	92.9					
1965	99.4	98.6	97.6	96.2	95.3	95.2						
1966	99.4	97.4	97.0	95.8	94.9							

TABLE 17A (Continued)

Year Of Grade 2 Enrol- ment	Grade 3 One Year Later	Grade 4 Two Years Later	Grade 5 Three Years Later	Grade 6 Four Years Later	Grade 7 Five Years Later	Grade 8 Six Years Later	Grade 9 Seven Years Later	Grade 10 Eight Years Later	Grade 11 Nine Years Later	Grade 12 Ten Years Later	Grade 13 Eleven Years Later	Year Of Grade 13 Enrol- ment
1967	98.4	96.8	96.4	95.3								
1968	99.0	97.6	97.0									
1969	98.6	97.0										
1970	98.7											

Source: Zsigmond and Wenaas, op. cit., pp. 238-239.

Firstly, the proportion of students retained in schools varies considerably among provinces. Secondly, the percentage of over-age students reaches a peak at Grade VII. This may be accounted for by relatively higher drop-out rates at the higher grades which reduce the percentage of over-age students beyond Grade VII. Thirdly, the percentage of underage students increases directly by grade so that the largest number of under-age students is found in Grade XII. And fourthly, lower grade school drop-outs tend to become employed in unskilled and labouring occupations. Higher grade drop-outs are more likely to work in semi-skilled, commercial or clerical jobs. Table 17A and Figure 14 show an estimated retention rate of Canada as a whole.

b) Northwest Territories

Retention rates for the two school districts, Mackenzie and Arctic, are given in Tables 17A and Figure 15. Grade enrolment data are available only from 1963-64 to 1968-69, making impossible the computation of an average retention rate for three cohorts of students. Even given the meagre data the tables show clearly that retention rates across the two districts are quite different.

There is a very low rate of enrolment in Grades VII and VIII for the Arctic District. A possible explanation for this is the sending of students to Duke of Edinburgh High School in Manitoba. It is difficult to ascertain the number of students leaving the Arctic to attend high school since data on enrolment at Duke of Edinburgh School by grade and by ethnic group is hard to obtain.

TABLE 17B

GRADE ENROLMENT AS A PERCENTAGE OF GRADE TWO ENROLMENT

RETENTION RATES

NORTHWEST TERRITORIES

(1963 - 1969)

ARCTIC N.W.T.	II	III	IV	V	VI	VII	VIII	IX
1963-64	100	78	109	55	46	14	7	
1964-65	100	93	83	54	48	15		
1965-66	100	108	93	80	51			
1966-67	100	103	140	82				
1967-68	100	83	91					
1968-69	100	81						
MACKENZIE N.W.T.								
1963-64	100	99	90	83	78	69	70	
1964-65	100	98	95	96	89	81		
1965-66	100	97	99	92	82			
1966-67	100	103	110	109				
1967-68	100	102	95					
1968-69	100	101						

Sources: Tables 6A and 6B.

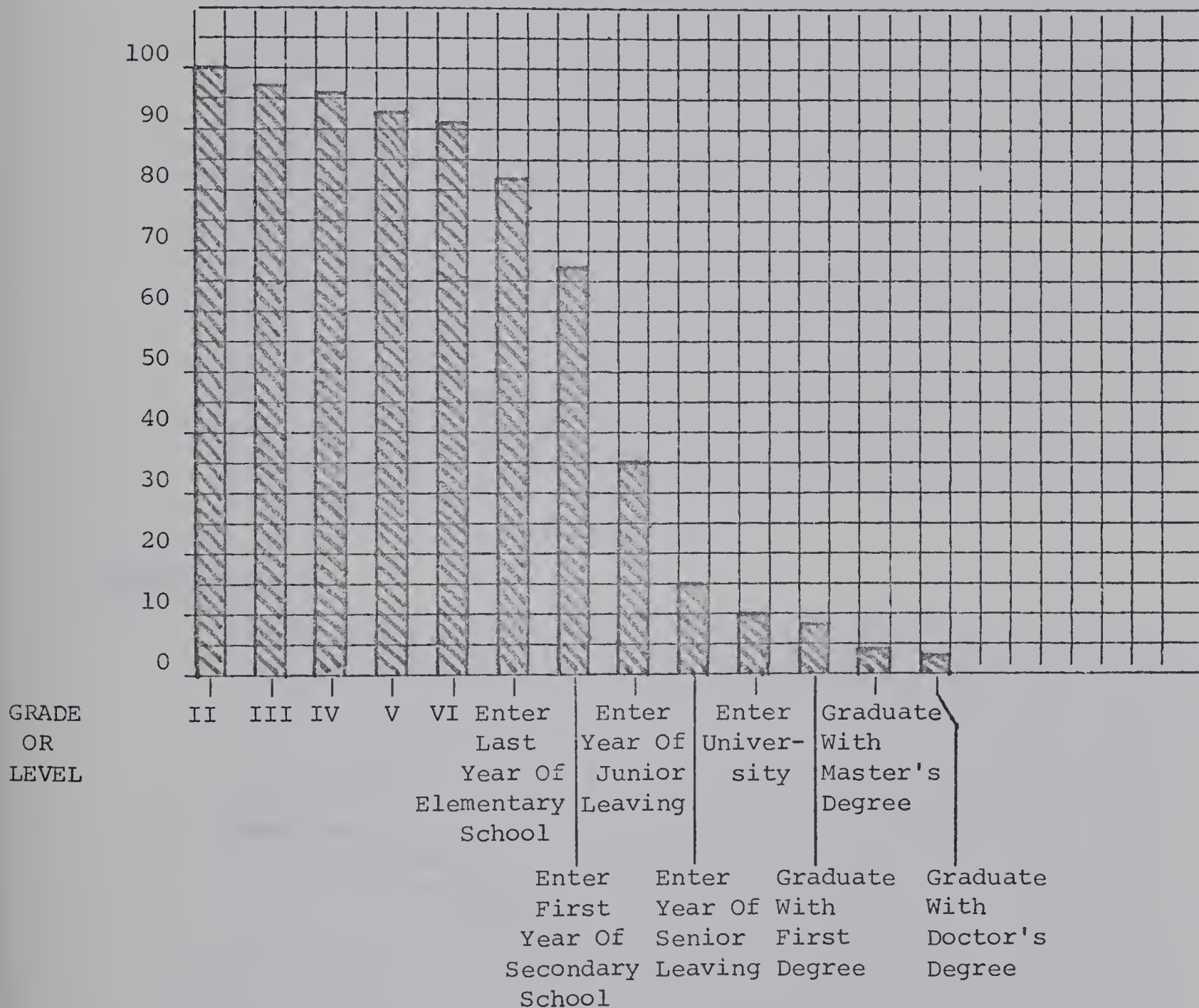
FIGURE 14

STUDENT RETENTION FROM GRADE 11 TO UNIVERSITY GRADUATION

CANADA

(1946 - 1958)

INDEX OF ENROLMENT



Source: Ibid, p. 45.

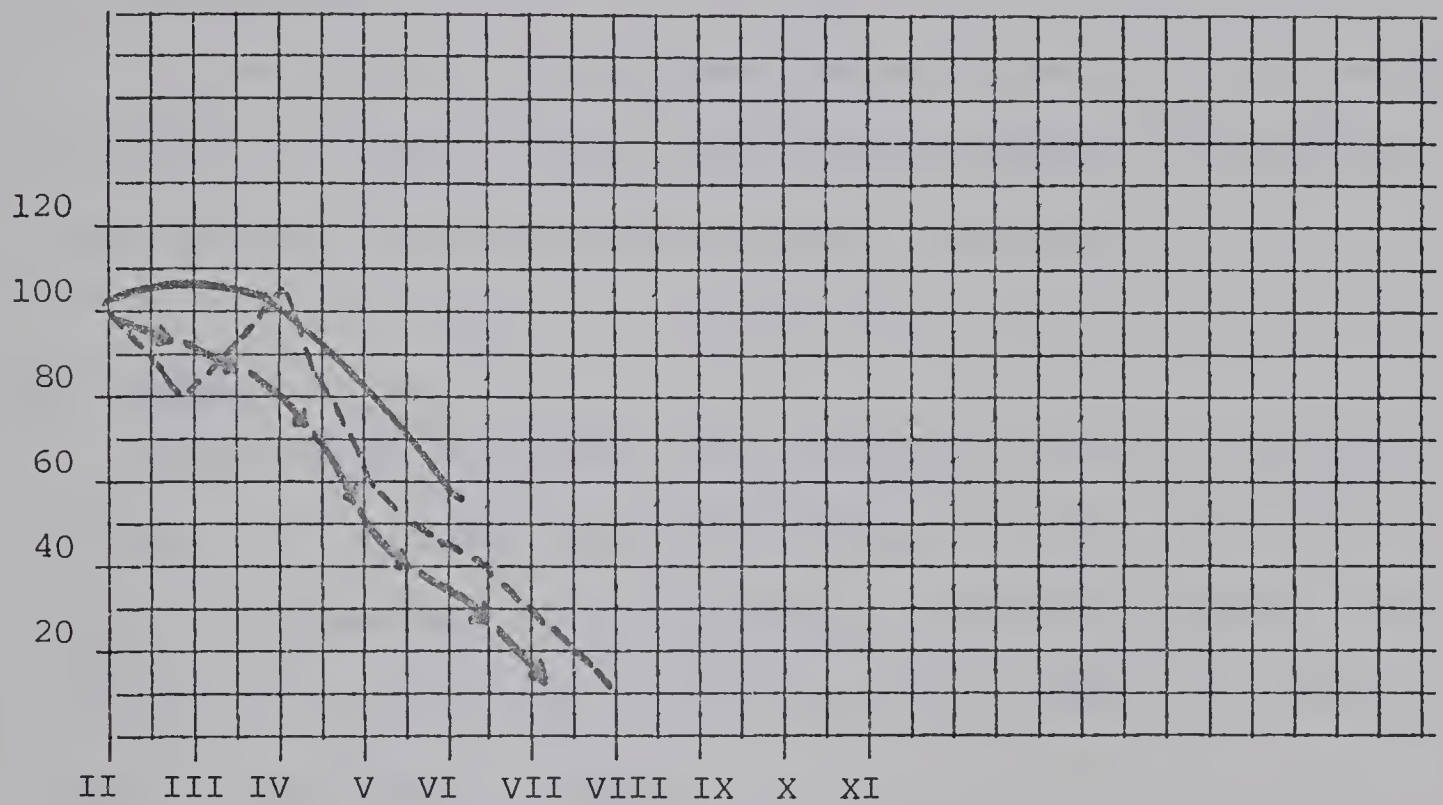
FIGURE 15

GRADE ENROLMENT AS A PERCENT OF GRADE II

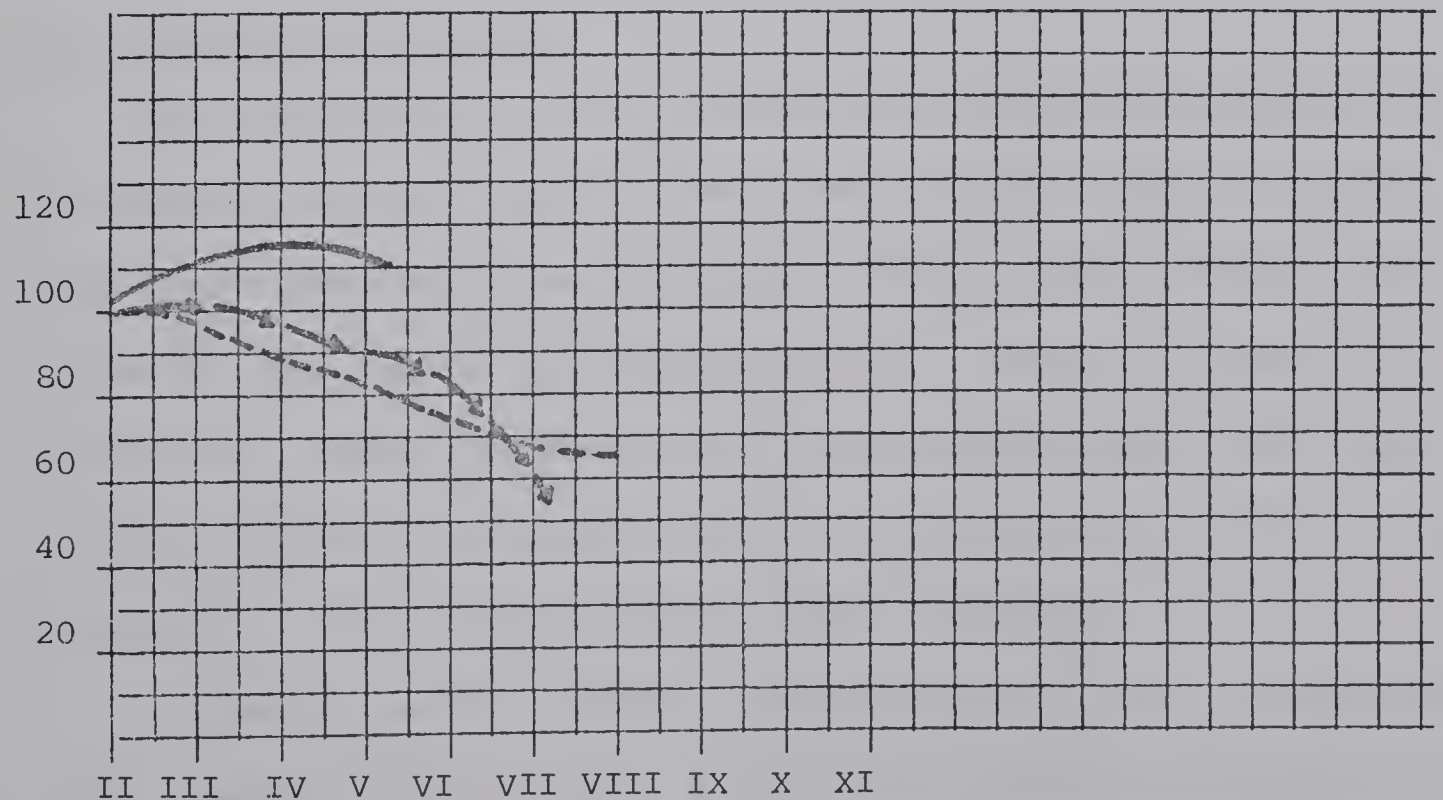
NORTHWEST TERRITORIES

(1963 - 1966)

ARCTIC N.W.T.



MCKENZIE N.W.T.



LEGEND:

1963-64 ---
 1964-65 → →
 1965-66 ———

Source: Table 17B.

Moreover, as Table 15 makes clear, retention rates are greatly reduced by the large number of potential secondary school students who are diverted to vocational school. (Refer to Table 15.)

5. Grade Ratios

On the basis of the foregoing discussion and with the knowledge of enrolment figures in both Canada and the Northwest Territories, grade ratios in the two areas may now be calculated.

a) Canada

Grade ratios for Canada over a period of time are represented by Table 18. The most substantial changes in grade ratios occur at the end of elementary and the beginning of secondary school. Reading Table 18 we note that the grade ratio for Grade 8 in 1952-53 was 87.1% and 98.8% in 1967-68.

b) Northwest Territories

The calculation of grade ratios in the Northwest Territories is by school district (Tables 6A, 6B, 19A and 19B), that is, according to the administrative divisions. However, grade ratios calculated by ethnic group are more meaningful. Insofar as more than 90% of the students of the Arctic District are Eskimos (See Table 10), an estimation of grade ratios for Eskimos can be arrived at on the basis of grade ratios for the Arctic District.

Estimating grade ratios of Indian children is more complicated since Indians constitute only a quarter of the school population of the Mackenzie District. Hence, all children in the Mackenzie

TABLE 18

GRADE RATIOS FOR TOTAL ELEMENTARY AND SECONDARY ENROLMENT

CANADA

(1952 - 1968)

	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	Grade 13
1952-53	92.0	100.7	98.7	97.2	95.4	92.9	87.2	88.6	75.5	71.7	64.4	24.4
1953-54	92.7	100.9	99.4	97.7	96.1	94.4	88.7	88.6	76.8	73.9	65.8	25.5
1954-55	94.2	101.1	98.8	98.4	97.0	94.8	89.0	90.4	77.9	73.9	65.9	26.0
1955-56	94.3	100.5	97.8	98.4	97.0	94.8	89.1	91.9	78.1	75.6	68.2	25.9
1956-57	95.0	100.0	98.0	98.9	96.1	95.2	89.7	92.1	77.8	74.1	65.6	23.3
1957-58	95.7	100.8	99.2	99.2	97.1	96.4	91.0	94.3	78.7	76.8	67.0	25.4
1958-59	95.6	100.5	98.3	99.5	96.6	97.1	92.8	95.7	80.9	80.1	67.2	26.1
1959-60	96.4	100.5	98.8	100.3	96.9	97.0	91.5	95.2	79.8	80.1	66.9	25.6
1960-61	96.5	100.2	98.6	99.7	97.5	98.1	92.8	96.4	81.7	81.3	67.1	25.8
1961-62	96.4	99.5	98.4	99.3	98.0	97.4	95.9	97.3	85.2	83.3	68.8	27.0
1962-63	96.9	99.8	98.4	99.3	97.8	97.4	97.6	96.9	84.3	82.3	68.0	27.8
1963-64	96.9	99.6	98.7	99.1	97.9	98.5	97.4	96.7	85.2	83.2	69.6	27.7
1964-65	96.6	99.1	98.7	99.1	97.7	99.8	98.0	96.2	86.2	85.0	71.9	28.9
1965-66	96.2	98.8	98.7	99.3	98.0	98.6	97.3	97.4	87.4	85.2	70.7	27.4
1966-67	96.2	99.4	98.8	100.1	98.1	99.2	97.8	97.3	89.8	88.4	59.9	25.5
1967-68	96.4	99.4	99.3	100.1	98.7	99.2	98.8	97.6	91.1	89.6	60.3	26.5

(Per cent)

ACTUAL

TABLE 18 (Continued)

- Sources: 1. Illing and Zsigmond, op. cit., p. 148.
2. Zsigmond and Wenaas, op. cit., p. 230.

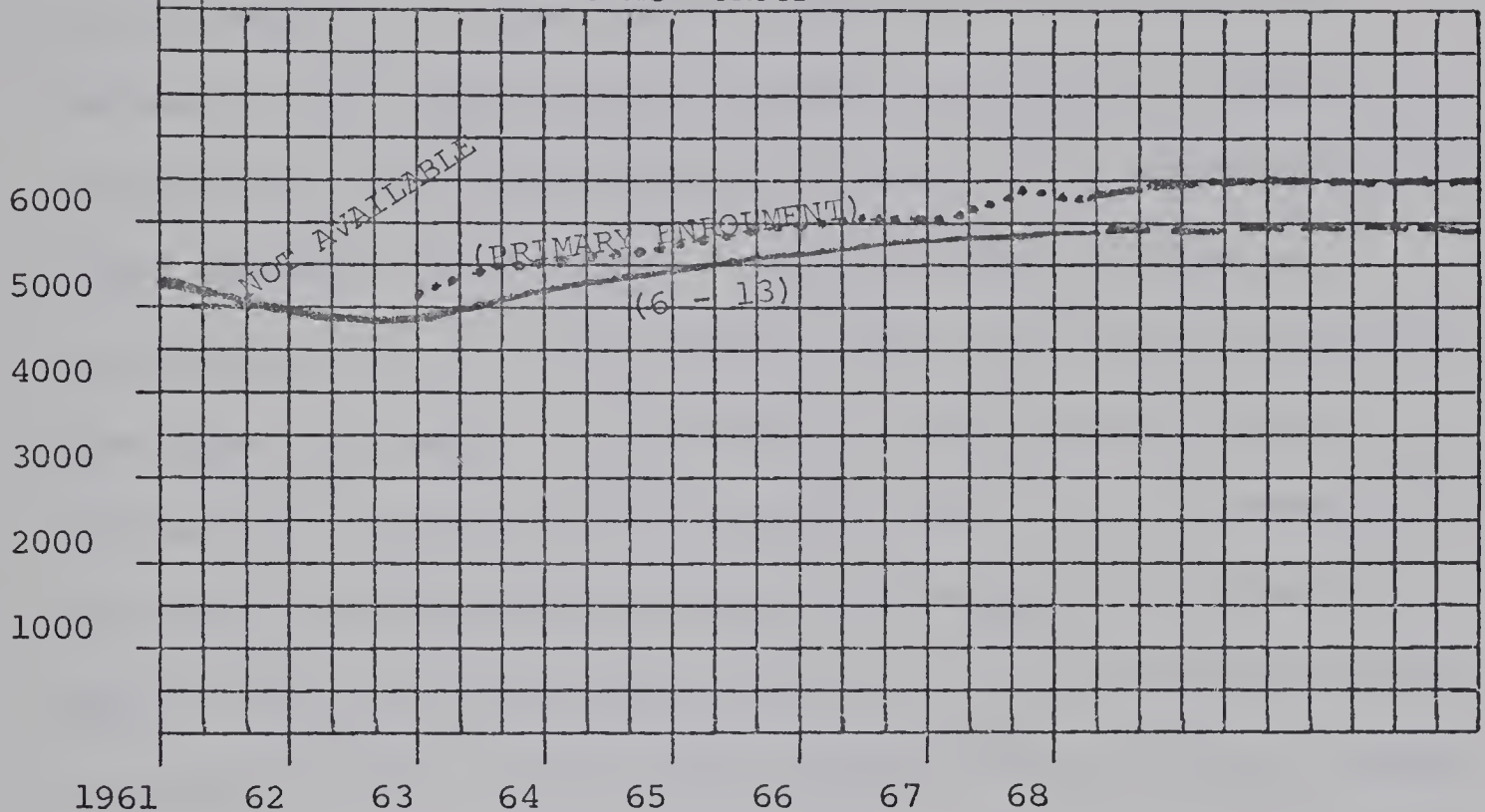
FIGURE 16

SCHOOL ENROLMENT AND POPULATION

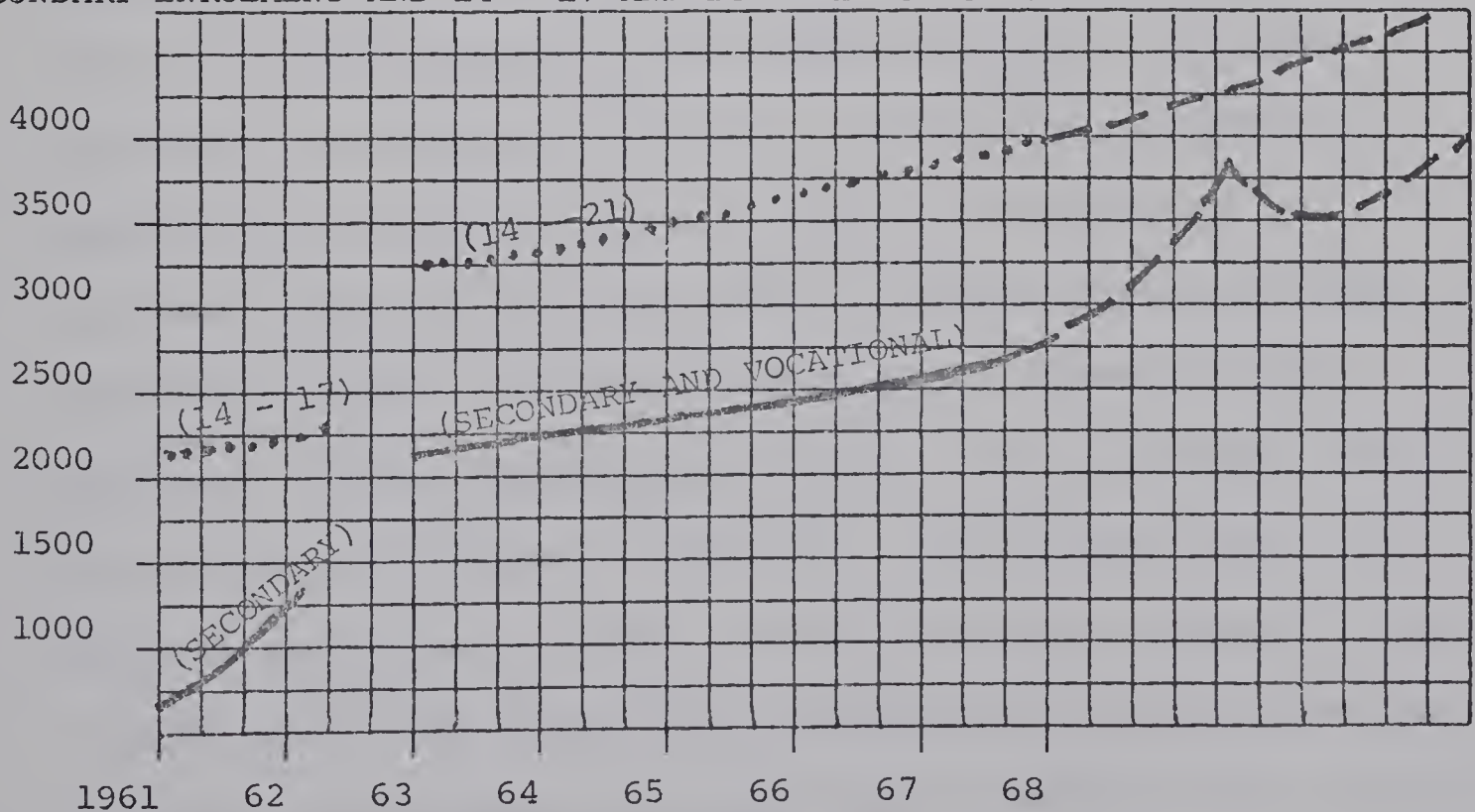
NORTHWEST TERRITORIES

(1961 - 1968)

ELEMENTARY ENROLMENT AND 6 - 13 AGE GROUP



SECONDARY ENROLMENT AND 14 - 17 AND 14 - 21 AGE GROUPS



Sources: 1. Tables 13, 6A and 6B.

2. C. Cornelissen, Preliminary Figures for Demographic Projections Model, Edmonton: Northern Resources Research Project, 1971.

District cannot be considered to behave as Indian children. An alternative method of computing Indian grade ratios relies upon information about the school participation of each of the ethnic groups (Table 11). Given that the school-age participation of Indians is 75% of their eligible school age population, one way to calculate the Indian participation is to calculate grade ratios from Indian enrolment figures alone. Since enrolment figures are available only for the year 1968-69, grade ratios must be estimated from these data alone. In accepting the 1968-69 enrolment data as the basis for the calculation of grade ratios, we must assume that the behavior of the Indian students with respect to enrolment in 1968-69 does not differ significantly from their enrolment patterns in preceding years. Since Indians comprise 25% of the total school population of the Northwest Territories, and since they constitute 25% of the total enrolment from grades two to five, 20% of the enrolment for grades six and seven, and 15% of the students in grade 8, one can safely conclude that their enrolment at the secondary level will fall below 15%. So grade ratios for Indian school enrolment are arrived at by using the elementary school enrolment rate for the Mackenzie District. For the higher grades, an adjustment of figures is necessary. The following table gives adjusted participation rates. Because students in grades 9 through 12 make up only 135 of the 1027 participating, we can conclude that only 13% of the Indians go to high school. Table 20 gives a history of Indian and Eskimo enrolment.

TABLE 19A
GRADE RATIOS AND ETHNIC GROUP ENROLMENT
NORTHWEST TERRITORIES (ARCTIC DISTRICT)
(1963 - 1969)

1.	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
Grade II	51	45	54	46	64	95
Grade III	87	93	108	103	83	81
Grade IV	61	140	89	86	136	109
Grade V	67	82	50	65	86	56
Grade VI	41	68	60	83	88	64
Grade VII	18	100	41	47	36	32
Grade VIII	25	216	26	38	55	41
Grade IX	11	100	21	62	87	31
Grade X	40	100	75	100	20	
Grade XI	33					
Grade XII						
2.	PERCENT ENROLMENT BY ETHNIC GROUPS					
Eskimos	93	92	92	91	92	92
Indians	0	0	0	0	1	1
Others	7	8	8	9	7	7

Sources: Tables 6A and 10.

TABLE 19B

GRADE RATIOS AND ETHNIC GROUP ENROLMENT
NORTHWEST TERRITORIES (MACKENZIE DISTRICT)
(1963 - 1970)

1.	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
Grade II	67	62	63	66	63	80	
Grade III	98	98	97	103	102	101	
Grade IV	89	91	97	102	106	93	
Grade V	94	89	92	100	93	97	
Grade VI	89	87	93	94	92	88	
Grade VII	81	97	97	101	88	90	
Grade VIII	78	99	73	84	87	101	
Grade IX	90	93	73	99	79	86	
Grade X	75	102	85	102	78	107	
Grade XI	83	97	83	85	81	84	
Grade XII	98	91	87	88	98	101	
2.	PERCENT ENROLMENT BY ETHNIC GROUPS						
Eskimos	18	17	18	18	18	19	
Indians	25	26	25	25	25	24	
Others	57	57	57	57	57	57	
3.	PERCENT OF PARTICIPATION BY ETHNIC GROUPS FOR ALL NORTHWEST TERRITORIES						
Eskimos	75	76		83			
Indians	72	75		79			
Others	99	99		97			

TABLE 19B (Continued)

Sources: Tables 6B, 8 and 10.

TABLE 20
GRADE RATIOS OF INDIANS AND ESKIMOS
NORTHWEST TERRITORIES
(1963 - 1969)

INDIANS						
	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
Grade II	67	62	63	66	63	80
Grade III	98	98	97	103	102	101
Grade IV	89	91	97	102	106	93
Grade V	94	89	92	100	93	97
Grade VI	71	69	75	75	74	70
Grade VII	65	78	80	81	71	72
Grade VIII	49	60	44	51	53	60
Grade IX	50	52	40	55	44	47
Grade X	38	51	43	51	39	54
Grade XI	21	25	21	21	20	21
Grade XII	27	23	21	22	24	25
ESKIMOS						
Grade II	51	45	54	46	64	95
Grade III	87	93	108	103	83	81
Grade IV	61	140	89	86	136	109
Grade V	67	82	50	65	86	56
Grade VI	41	68	60	83	88	64
Grade VII	18	100	41	47	36	32
Grade VIII	25	216	26	38	55	41
Grade IX	11	100	21	62	87	31
Grade X	40	100	75	100	20	
Grade XI	33					

Sources: Tables 19A and 19B.

Enrolment in higher education will be treated only slightly. This is owing to the very small enrolment of natives in higher education. The following table gives actual numbers from 1964-65 to 1970-71.

<u>1964-65</u>	<u>1965-66</u>	<u>1966-67</u>	<u>1967-68</u>	<u>1968-69</u>	<u>1969-70</u>	<u>1970-71</u>
25	38	43	79	105	116	135

D. Projection Of School Enrolment

A projection for the Northwest Territories school enrolment must be based on: 1) past Canadian enrolment trends, and 2) a consideration of socio-economic factors unique to the Northwest Territories¹.

Socio-economic factors will particularly affect secondary enrolment. Primary enrolment will not be appreciably affected; the gradual assimilation of a modern economy should bring primary enrolment to Canadian norms by 1980 (See Figure 16).

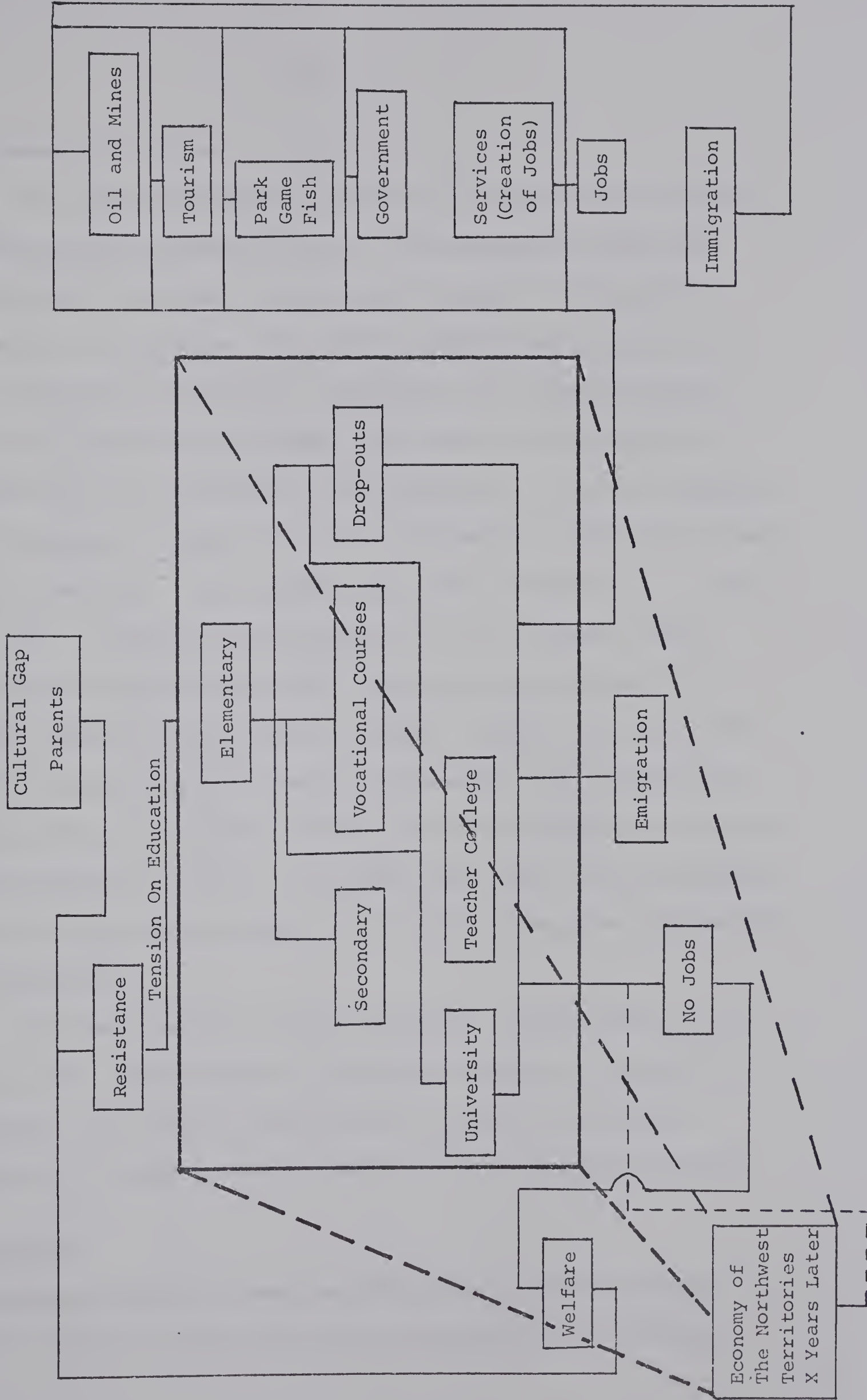
Resistance to secondary enrolment will come primarily from two sources: firstly, the cultural gap between the character and traditions of the native population and a modern secondary educational system and, secondly, the native of the developing Northwest Territories economy¹.

Parental resistance to secondary education will constitute the most obvious manifestation of the cultural gap; it has created many problems in other developing areas and will inevitably do so in the

1. See Chart VI.

CHART VI

NORTHWEST TERRITORIES ECONOMY



Northwest Territories.

The present educational system was instituted without adequate consideration of economic factors. The educational system must provide more vocational and technical training if high drop-out rates are to be avoided. From 1971 to 1980-81 the installation of the territorial government in conjunction with extensive housing and road construction programmes will create a strong demand for technically and vocationally trained manpower. A lack of technical and vocational training facilities will result in jobs being filled by non-residents. This primary impetus will likely begin to weaken by 1980. By 1985-90 growing numbers of civil servants, social workers and school teachers will necessitate the existence of a highly labour-intensive services sector. Finally, by around 1995-2000, if appropriate policies are implemented, the transformation from primary to secondary industries and the development of tourism and fisheries will begin to transform the economy into one creating its own supply-demand structure and associated manpower requirements. (See Chart VI.)

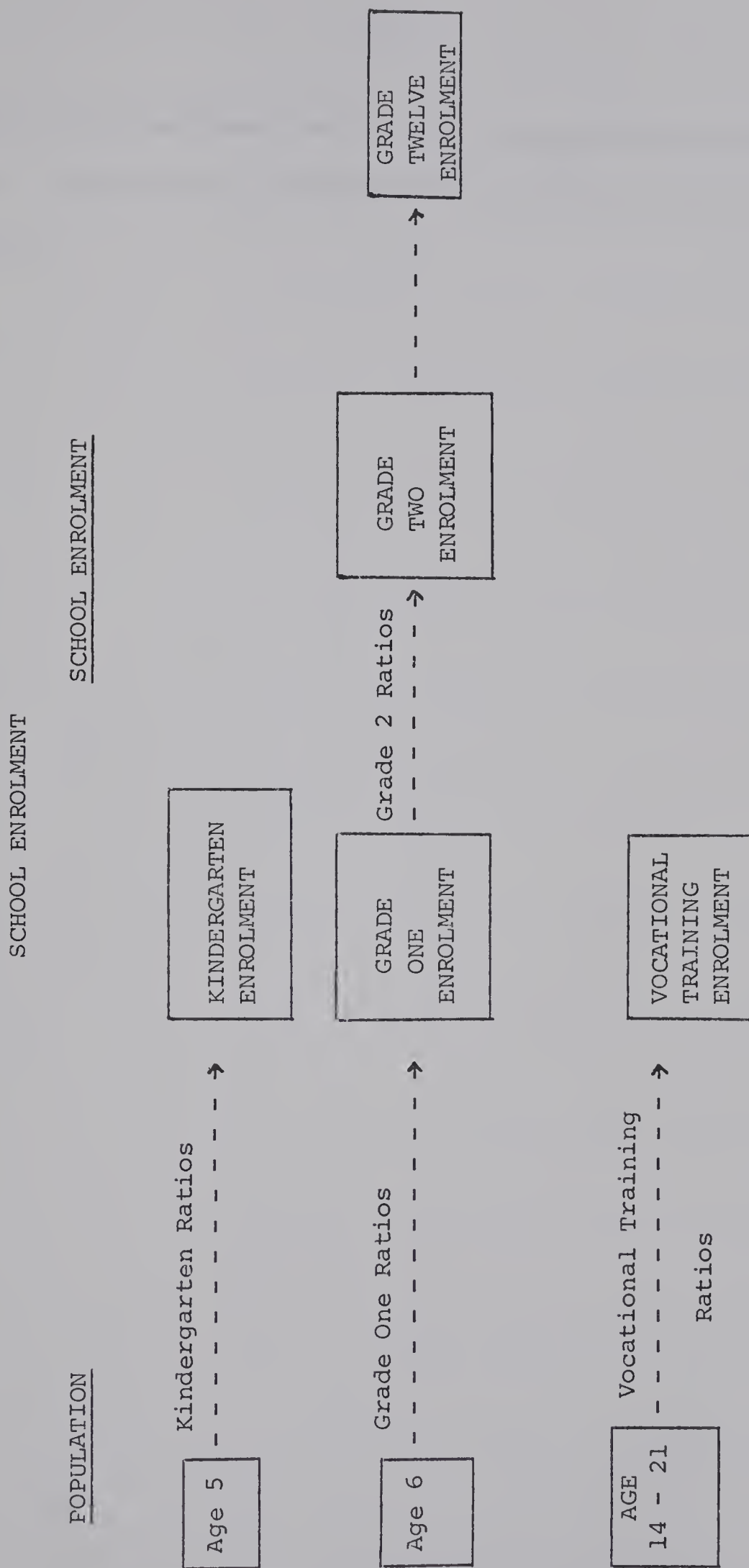
It seems apparent then that vocational training must and will play a more important part in secondary education. Already 34% of Eskimos in the 14 to 21 age group are enrolled in vocational training in contrast to only 19% of Indians in the same category.

E. Conclusion

The basic framework to make the projections is represented by Chart VII; finally the actual and projected grade ratios for Indians

CHART VII

FRAMEWORK FOR PROJECTIONS OF SCHOOL ENROLMENT



and Eskimos of the Northwest Territories are presented in Table 21A and Table 21B. The resulting enrolment school population will be given in Chapter Five.

TABLE 21A

AGE AND GRADE RATIOS - INDIANS

ACTUAL AND PROJECTED

NORTHWEST TERRITORIES

(1963 - 1982)

YEAR	K	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6	GRADE 7	GRADE 8	GRADE 9	GRADE 10	GRADE 11	GRADE 12	GRADE (14-17) V.T.
1963-64	6.1	168.1	67.0	98.0	89.0	94.0	71.0	65.0	49.0	50.0	38.0	21.0	27.0	11.0
1964-65	18.0	173.2	62.0	98.0	91.0	89.0	69.0	78.0	60.0	52.0	51.0	25.0	23.0	10.0
1965-66	14.0	132.8	63.0	97.0	97.0	92.0	75.0	80.0	44.0	40.0	43.0	21.0	21.0	13.0
1966-67	14.0	176.1	66.0	103.0	102.0	100.0	75.0	81.0	51.0	55.0	51.0	21.0	22.0	14.0
1967-68		137.0	63.0	102.0	106.0	93.0	74.0	71.0	53.0	44.0	39.0	20.0	24.0	14.0
1968-69	40.0	108.8	80.0	101.0	93.0	97.0	70.0	72.0	60.0	47.0	54.0	21.0	25.0	19.0
1969-70	60.0	130.3	81.0	102.0	94.1	97.1	74.1	74.5	61.2	48.1	55.1	24.9	24.0	19.0
1970-71	61.1	133.4	79.0	103.0	95.2	97.2	75.1	75.6	62.3	49.7	56.2	27.8	40.1	18.0
1971-72	62.0	140.2	78.0	99.0	99.1	96.4	71.2	77.9	66.7	49.1	59.4	29.1	42.4	17.0
1972-73	65.0	135.6	81.1	99.8	99.7	94.2	75.6	78.6	68.9	52.1	60.2	34.2	39.3	
1973-74	68.0	132.4	81.3	99.2	99.6	99.1	75.7	79.8	69.9	54.1	64.6	38.1	39.2	14.0
1974-75	70.0	130.2	80.9	99.5	99.4	99.2	78.9	79.9	72.1	55.6	67.8	39.2	40.1	15.0
1975-76	72.0	128.6	82.1	101.2	99.2	98.7	79.1	82.1	73.1	58.1	70.1	44.2	44.5	16.0
1976-77	74.0	129.4	79.4	98.2	100.1	98.6	80.1	83.1	74.1	64.1	79.4	54.1	47.1	17.0
1977-78	75.0	128.7	81.4	99.6	98.2	97.1	81.2	84.5	75.7	65.6	80.4	56.2	48.4	18.0
1978-79	77.0	125.9	84.2	99.7	96.2	97.2	82.3	85.6	78.2	70.1	85.6	57.8	49.5	19.0
1979-80	80.0	124.2	81.2	98.7	97.1	99.1	83.4	87.8	79.6	71.2	86.8	59.6	51.2	20.0
1980-81	82.0	122.3	82.3	96.4	98.2	98.2	84.5	88.9	79.9	72.3	87.9	60.4	55.4	21.0
1981-82	83.0	127.1	81.4	98.8	97.5	98.6	85.6	89.9	80.1	73.4	88.1	65.1	56.7	22.0

TABLE 21A (Continued)

K = Kindergarten
V.T. = Vocational Training

TABLE 21B

AGE AND GRADE RATIOS - ESKIMOS

ACTUAL AND PROJECTED

NORTHWEST TERRITORIES

(1963 - 1982)

YEAR	K	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6	GRADE 7	GRADE 8	GRADE 9	GRADE 10	GRADE 11	GRADE 12	GRADE ^a (14-17) V.T.
1963-64	--	156.5	51.0	87.0	61.0	69.0	41.0	18.0	25.0	11.0	40.0	33.0		12.0
1964-65	5.0	161.0	45.0	93.0	140.0	82.0	68.0	100.0	216.0	100.0	100.0	25.0		12.0
1965-66	5.0	123.2	54.0	108.0	39.0	50.0	60.0	41.0	26.0	21.0	75.0	21.0		14.0
1966-67	8.0	163.8	46.0	103.4	86.0	65.0	83.0	47.0	38.0	62.0	100.0	21.0		12.0
1967-68	57.0	127.3	64.0	83.0	136.0	86.0	88.0	36.0	55.0	87.0	20.0	20.0		16.0
1968-69	104.0	101.3	95.0	81.0	109.0	56.0	64.0	32.0	41.0	31.0	98.8	21.0		34.0
1969-70	93.0	121.0	66.1	84.0	110.0	59.0	65.6	33.4	42.4	42.1	38.2	24.9		29.0
1970-71	95.0	122.6	67.8	88.0	95.0	60.1	70.1	35.6	43.2	43.1	97.6	24.1		28.0
1971-72	98.0	125.4	80.1	90.1	99.1	68.0	72.3	40.1	44.5	44.1	40.6	29.4		27.0
1972-73	99.1	125.3	80.2	92.6	90.1	79.1	73.4	41.2	45.6	45.6	42.4	30.4		30.0
1973-74	99.2	128.6	79.4	100.1	99.4	78.1	75.6	44.5	47.8	47.8	47.3	32.3		31.0
1974-75	99.3	130.2	75.4	100.8	99.3	80.2	79.6	49.7	48.9	49.1	98.5	34.1		32.0
1975-76	99.4	128.1	74.3	99.6	92.1	89.1	82.1	51.2	50.2	52.1	97.6	35.6		33.0
1976-77	99.3	127.9	72.2	98.6	93.4	90.1	81.9	75.4	51.4	53.4	95.4	38.9		36.0
1977-78	99.2	125.4	71.9	97.6	93.2	89.6	80.9	77.2	50.4	55.6	94.9	42.3		38.0
1978-79	100.0	124.3	72.3	100.2	99.1	88.6	89.1	78.2	52.3	56.1	93.2	47.3		39.0
1979-80	101.1	120.2	72.7	101.3	97.1	87.5	88.6	81.2	51.4	58.3	89.8	44.5		40.0
1980-81	101.2	122.1	79.1	101.4	91.2	84.3	87.6	83.4	52.5	63.4	89.7	42.1		41.0
1981-82	103.2	123.2	79.2	102.4	91.4	85.6	86.5	85.6	55.6	67.2	79.6	41.4		39.0

TABLE 21B (Continued)

K = Kindergarten

V.T. = Vocational Training

a = Information Not Available

CHAPTER FOUR

ACTUAL AND PROJECTED EXPENDITURE OF EDUCATION

As well as data on the structure of the population, on the quantitative framework within which educational development has to be projected and implemented, further information is needed. To know how much money is expended on Indian and Eskimo education, it is necessary to be aware of the current state of economy, of the level of living, of the gross national product (GNP) and of the comparative amount expended on education in general.

"Adequate statistical information is essential to scientific education planning; the more relevant information available, the more orderly and reliable will be the planning if the judgement remains constant"¹.

Plan Of The Chapter

As noted above, in order to appreciate the expenditures on Indian and Eskimo education, a comparison with expenditures on Canadian education as a whole is necessary. This chapter will therefore be presented as follows: firstly, the proportion of educational expenditures in the total budget; secondly, the source of funds for educational needs; thirdly, a breakdown of educational expenditures by functions; fourthly, the expenditures of education per capita; and finally, a projection of educational expenditures for Indians and Eskimos in the Northwest Territories.

1. Dominion Bureau of Statistics, Education Planning and the Expanding Economy, Catalogue No. 81-524, Ottawa: Queen's Printer, 1964, p. 53.

TABLE 22

TOTAL EXPENDITURE, EDUCATIONAL EXPENDITURE AND GROSS NATIONAL PRODUCT

(CURRENT DOLLARS)

(1955 - 1970)

	GROSS NATIONAL PRODUCT		GOVERNMENT EXPENDITURES*		EDUCATIONAL EXPENDITURES**		
	TOTAL ¹	GROWTH BY YEAR	TOTAL ²	GROWTH BY YEAR	TOTAL ³	GROWTH BY YEAR	AS % OF GNP
	(\$ MILLIONS)	(%)	(\$ MILLIONS)	(%)	(\$ MILLIONS)	(%)	(%)
1955	27,895		7,346		826.8		2.9
1956	31,374	12.4	7,951	8.2	928.5	12.3	2.9
1957	32,907	4.8	8,601	8.1	1,110.3	19.5	3.3
1958	34,094	3.6	9,745	13.3	1,264.4	13.8	3.7
1959	36,266	6.3	10,603	8.8	1,458.6	15.3	4.0
1960	37,775	4.1	11,594	9.3	1,656.9	13.5	4.3
1961	39,080	3.4	13,329	14.9	1,912.6	15.4	4.8
1962	42,353	8.3	14,433	8.2	2,324.4	21.5	5.4
1963	45,465	7.3	15,273	5.8	2,485.2	6.9	5.4
1964	49,783	9.4	16,510	8.0	2,866.9	15.3	5.7
1965	54,897	10.2	18,041	9.2	3,410.6	18.9	6.2
1966	61,421	11.8	20,995	16.3	4,158.7	21.9	6.7
1967	65,722	7.0	24,135	14.9	4,539.0	9.1	6.9
1968	71,388	8.6	27,308	13.1	5,663.8	24.7	7.9
1969	78,560	10.0	30,689	12.3	5,725.1	1.0	7.2
1970	84,468	7.5	35,638	16.1	6,529.0	14.0	7.7

* Including inter-governmental transfers.

** Including formal, vocational and other educational expenditure.

1955 - means 1954-55 school year.

TABLE 22 (Continued)

- Sources:
1. Dominion Bureau of Statistics, National Income and Expenditure Accounts, 1926-68, Catalogue No. 13201, Ottawa: Queen's Printer for 1955 to 1966; and Dominion Bureau of Statistics, ibid., Fourth Quarter and Preliminary Annual 1970, Catalogue No. 13-001, Ottawa: Queen's Printer, 1971, pp. 16-17.
 2. Dominion Bureau of Statistics, National Income and Expenditures Accounts, Catalogue No. 13531E, Ottawa: Queen's Printer, 1972 (taken from the tape CANSIM Series, Identifier 000570.8).
 3. Dominion Bureau of Statistics, Survey of Education Finance 1966, Catalogue No. 81-208, Ottawa: Queen's Printer, 1969, p. 11 for 1955 to 1966; Dominion Bureau of Statistics, Preliminary Statistics of Education 1966-67, 1969-70, Catalogue No. 81-201, Ottawa: Queen's Printer, 1968, 1971, p. 46 (1966-67), p. 56 (1969-70) for 1967 and 1968, and Dominion Bureau of Statistics, Advanced Statistics of Education 1971-72, Catalogue No. 81-220, Ottawa: Queen's Printer, 1971, p. 32 for 1969 and 1970.

TABLE 23

FEDERAL EDUCATIONAL EXPENDITURES IN THE TOTAL BUDGET

CANADA (FEDERAL GOVERNMENT)

(1955 - 1970)

YEAR	ALL FEDERAL EXPENDITURES*	AS % OF GROSS NATIONAL PRODUCT		EDUCATIONAL EXPENDITURES** OF FEDERAL GOVERNMENT		AS % OF ALL EDUCATIONAL EXPENDITURES		EDUCATIONAL EXPENDITURES OF FEDERAL GOVERNMENT IN THE NORTHWEST TERRITORIES AND ARCTIC QUEBEC	
	TOTAL ¹	(%)	(\$ Millions)	TOTAL ²	(%)	AS % OF ALL EDUCATIONAL EXPENDITURES	TOTAL ³	AS % OF FEDERAL EDUCATIONAL EXPENDITURES	(%)
1955	4,644	16.6	43.2		0.9				
1956	4,915	15.6	53.7		1.0		2.9		5.4
1957	5,205	15.8	70.1		1.3		7.0		9.9
1958	5,859	17.1	83.6		1.4		7.4		8.8
1959	6,115	16.8	109.0		1.7		7.7		7.0
1960	6,518	17.2	121.8		1.8		6.9		5.6
1961	6,885	17.6	120.6		1.7		6.9		5.7
1962	7,218	17.0	156.2		2.1		7.7		4.9
1963	7,374	16.2	350.4		4.7		7.2		2.0
1964	7,804	15.6	292.5		3.7		7.9		2.7
1965	8,201	14.9	271.1		3.3		10.2		3.7
1966	9,344	15.2	352.3		3.7		11.5		3.0
1967	10,551	16.0	543.1		5.1		12.2		2.2

TABLE 23 (Continued)

YEAR	ALL FEDERAL EXPENDITURES*		EDUCATIONAL EXPENDITURES** OF FEDERAL GOVERNMENT		EDUCATIONAL EXPENDITURES OF FEDERAL GOVERNMENT AND ARCTIC QUEBEC	
	TOTAL ¹	AS % OF GROSS NATIONAL PRODUCT	TOTAL ²	AS % OF ALL EDUCATIONAL EXPENDITURES	TOTAL ³	AS % OF FEDERAL EDUCATIONAL EXPENDITURES
	(\$ Millions)	(%)	(\$ Millions)	(%)	(\$ Millions)	(%)

1968

11,690

16.3

818.0

6.9

15.3

1.8

1969

13,044

16.6

632.2

4.8

6.3

0.9

1970

14,759

17.4

715.8

4.8

* Including inter-governmental transfers

** Including formal, vocational and other educational activities (1955 is 1954-55 school year)

Sources: 1. Dominion Bureau of Statistics, National Income and Expenditure Accounts, Catalogue No. 13531, Ottawa: Queen's Printer, 1971 (taken from tape CANSIM Series, identifier 000750.9)2. Dominion Bureau of Statistics, Survey of Education Finance, 1965 and 1966, Catalogue No. 81-208, Ottawa: Queen's Printer, 1968, 1969, pp. 44-49 (1968) for 1955 to 1966 and pp 17-18 (1969) for 1967; and Dominion Bureau of Statistics, Advance Statistics of Education, 1967-68 and 1971-72, Catalogue No. 81-220, Ottawa: Queen's Printer, 1968, 1972, p. 9 (1968) and p. 32 (1972) for 1967 to 1971.3. Department of Finance, Public Accounts 1960 . . . 1971, Ottawa: Queen's Printer, 1961 to 1972.

A. Growth In Educational Expenditure¹

One factor of obvious relevance in a study which attempts to project educational expenditure is the availability of financial resources for education. If expenditure on Education is to increase faster than the growth of financial resources, it seems likely that there will be increasing resistance from other sectors of the economy. Since both the public and private sectors provide resources for educational expenditure, it might be more useful to examine educational expenditures as a proportional of total resources rather than a proportion only of public or governmental resources.

Two methods that can be used to examine the relative expenditure on education in Canada are to examine the share of Gross National Product² absorbed by educational expenditures or to measure educational expenditures as a proportion of total personal income (P.I.).

Expenditure on education in Canada as a proportion of GNP has risen quite rapidly in the last few decades. Table 22 shows that expenditure on education has increased from 2.9 percent of GNP in 1955 to 7.7 percent in 1970.

Data on total Canadian and provincial personal income is available and easily comparable since it is "the total income of all persons and it includes salaries, wages, profits of individuals and entrepreneurs, interest earnings, government transfer payments such as the old age

1. See Table 22 (There is no problem with using current dollars figures since we are using current dollar ratios).

2. The Gross National Product constitutes "the total value of all goods and services produced by Canadian residents during the year." See Dominion Bureau of Statistics, Survey of Education Finance 1966, Catalogue No. 81-209. Ottawa: Queen's Printer, 1967, p. 8.

pensions, family allowances and unemployment insurance benefits"¹.

However, there is a complication in using personal income as a measure of the total resource base for providing for educational expenditure in the Northwest Territories. The financial resources of the educational sector of the Northwest Territories are not dependent on, or directly related to total personal income in the Northwest Territories. Rather the funds for non-native education are taken from the territorial government budget which is largely dependent on a grant from the federal government while expenditure on native education is the direct financial responsibility of the federal government. Thus, the personal income base of the population of the Northwest Territories is not necessarily an important constraint on growth of expenditure on education. Thus, there are two sources of funds for growth in educational expenditure in the Northwest Territories and the constraints imposed on these two sources will likely be of different magnitude.

a) Canada (federal budget)

Federal government expenditures constitute an important part of the Gross National Product (GNP). On the basis of federal budget data, federal expenditures ranged from 17.2 percent in 1960 to 17.4 percent of the GNP in 1970 (See Table 23). In this budget, educational expenditures for Indians and Eskimos varied from a range of 5.6 percent to 0.9 percent of federal educational expenditures in the period 1960 to 1970. Thus, the educational budget for Indians and Eskimos constitutes a relatively minor part of the federal budget

1. Ibid., p. 8.

and it is unlikely that there would be much resistance from the federal government to relatively small additions in expenditures on Indians and Eskimos.

b) Northwest Territories

The situation is quite different for the Northwest Territories budget since education constituted from 22.1 percent of the total expenditures in 1955-56 to 22.8 percent in 1968-69 (See Table 24). Here a certain level of resistance may be expected from other departments in the government of the Northwest Territories, resistance which will impede the growth of the educational share in the total territorial budget.

B. Source Of Funds

a) Canada

Traditionally, the educational system in Canada has been funded by local resources, generally from taxes levied on property owners. Since education is a provincial responsibility, provincial governments have also played a major role in funding the educational system. Table 25 gives a breakdown of the source of funds for formal and vocational education. Local governments, closely followed by provincial governments, provided 43 percent and 41 percent respectively in 1955-56.

However, there have been two major trends in the shares of different sources as the table shows. The rapid increase in educational expenditure has put pressure on the limited tax base of local government and more senior levels of government with a

TABLE 24

TOTAL AND EDUCATIONAL EXPENDITURES

NORTHWEST TERRITORIES

(1955 - 1970)

	ALL EXPENDITURES OF THE NORTHWEST TERRITORIES GOVERNMENT		EDUCATIONAL EXPENDITURES OF THE NORTHWEST TERRITORIES GOVERNMENT		AS A % OF TOTAL EXPENDITURES OF THE NORTHWEST TERRITORIES GOVERNMENT		ALL EDUCATIONAL EXPENDITURES OF THE NORTHWEST TERRITORIES	
	TOTAL ¹ (\$ Thousands)	ANNUAL GROWTH	TOTAL ¹ (\$ Thousands)	ANNUAL GROWTH (%)	AS A % OF TOTAL EXPENDITURES OF THE NORTHWEST TERRITORIES GOVERNMENT		TOTAL ² (\$ Thousands)	ANNUAL GROWTH (%)
1955-56	1,368		302		22.1		3,296	
1956-57	1,798	31.4	371	22.8	20.6		7,708	133.8
1957-58	2,655	47.6	677	82.4	25.5		8,226	6.7
1958-59	2,993	12.7	753	11.2	25.1		8,235	0.0
1959-60	2,747	-8.2	532	-29.3	19.3		7,587	-7.8
1960-61	3,672	33.6	649	21.9	17.6		7,753	2.1
1961-62	4,535	23.5	757	16.6	16.6		9,227	19.0
1962-63	6,480	42.8	1,446	91.0	22.3		8,478	-0.8
1963-64	7,100	9.5	1,239	-14.3	17.4		9,521	12.3
1964-65	8,628	9.1	1,589	28.2	18.4		12,235	28.5
1965-66	10,836	25.5	2,010	26.4	18.5		13,821	12.9

TABLE 24 (Continued)

	ALL EXPENDITURES OF THE NORTHWEST TERRITORIES GOVERNMENT		EDUCATIONAL EXPENDITURES OF THE NORTHWEST TERRITORIES GOVERNMENT		ALL EDUCATIONAL EXPENDITURES OF THE NORTHWEST TERRITORIES	
	TOTAL ¹	ANNUAL GROWTH	TOTAL ¹	ANNUAL GROWTH	TOTAL ²	ANNUAL GROWTH
	(\$ Thousands)	(%)	(\$ Thousands)	(%)	(\$ Thousands)	(%)
1966-67	14,332	32.2	2,320	15.4	17,921	29.6
1967-68	14,584	17.9	4,558	31.2		3.8 ^a
1968-69	20,218	38.6	4,627	1.5	19,291	3.8
1969-70	41,279	104.1				

a) estimated

Sources: 1. Department of Northern Affairs and National Resources, Annual Report, 1955-56, 1956-57, 1957-58 and 1958-59, Ottawa: Queen's Printer, 1956 to 1959, p. 106 (1956), p. 106 (1957), p. 108 (1958) and p. 108 (1959); and Government of the Northwest Territories, op. cit., 1960 . . . 1970, p. 24 (1960), p. 24 (1961), p. 29 (1962), p. 12 (1963), p. 22 (1964), p. 21 (1965), p. 60 (1966), p. 20 (1967), p. 37 (1968), and p. 41 (1970).

2. Department of Indian Affairs and Northern Development, Annual Report, 1967-68, Ottawa: Queen's Printer, 1968, p. 20 for 1957-58 to 1967-68; and Dominion Bureau of Statistics, Preliminary Statistics on Education, 1969-70, Catalogue No. 81-201, Ottawa: Queen's Printer, 1971, p. 55 for 1968-69.

TABLE 25

SOURCES OF FUNDS FOR EDUCATIONAL PURPOSES*

(PERCENTAGE OF EDUCATIONAL EXPENDITURES*)

CANADA

(1955 - 1971)

	LOCAL	PROVINCIAL	FEDERAL	OTHERS
1955-56	43	41	6	10
1956-57	44	40	7	9
1957-58	42	42	7	9
1958-59	40	42	8	10
1959-60	41	42	8	9
1960-61	40	44	7	9
1961-62	37	45	8	10
1962-63	32	44	15	9
1963-64	34	45	11	10
1964-65	34	46	10	12
1965-66	31	47	10	12
1966-67	28	48	13	11
1967-68	26	47	18	9
1968-69	26	54	12	8
1969-70	26	54	11	9
1970-71	27	54	11	8

*Includes Formal and Vocational Education Only.

- Sources: 1. Dominion Bureau of Statistics, Survey of Education Finance, 1966, Catalogue No. 81-208, Ottawa: Queen's Printer, 1969, pp. 41-48 for 1954 to 1967.
2. Dominion Bureau of Statistics, Advanced Statistics of Education, 1967-68, 1970-71, Catalogue No. 81-220, Ottawa: Queen's Printer, 1967, 1970, p. 6 and 9 (1967-68) for 1967-68 and p. 30 (1970-71) for 1968 to 1970.

broader tax base have increased their share. As a consequence, the federal government has become an important partner in funding educational expenditure despite the constitutional restrictions of the British North America Act. The share of the federal government has increased from six percent in 1955-56 to 18 percent in 1967-68 and then fell again to 11 percent in 1970-71. At the same time the share of local authorities fell from first place, or 43 percent, in 1955-56 to only 27 percent in 1970-71. The provincial authorities have also increased their share and provided over half of all educational funds by 1970-71. Other sources of funds have had a fairly stable share of the total.

b) Northwest Territories

The situation is quite different in the Northwest Territories since local funds provide only a negligible share of total expenditure on education (See Table 26). The territorial government is very much the dominant source of funds, although its share of the total has fallen from 91 percent in 1955-56 to 76 percent in 1968-69. The federal government, because it has a direct responsibility for education for the native population, provides relatively twice as great a share of expenditures on education as it provides in the rest of Canada. The trend of increasing federal involvement in the funding of educational expenditure is also evident in the Northwest Territories. The share of the federal government has increased from 11 percent in 1955-56 to 22 percent in 1968-69. These figures are not exactly correct since federal funding of education in the

TABLE 26

SOURCES OF FUNDS FOR EDUCATIONAL PURPOSES*

(PERCENTAGE OF TOTAL EDUCATIONAL EXPENDITURES*)

NORTHWEST TERRITORIES

(1955 - 1969)

	LOCAL ¹	TERRITORIAL ²	FEDERAL ²
1955-56		91	9
1956-57	1	89	10
1957-58	0	92	8
1958-59	0	89	11
1959-60	2	92	6
1960-61	2	92	6
1961-62	2	92	6
1962-63	3	83	14
1963-64	2	88	11
1964-65	2	87	11
1965-66	2	85	13
1966-67	2	87	11
1967-68			
1968-69	2	76	22

Blank: not available

* Includes formal and vocational education only

Sources: 1. Dominion Bureau of Statistics, Survey of Education Finance, 1963, 1965, 1966, Catalogue No. 81-208, Ottawa: Queen's Printer, 1967, 1969, 1970, p. 34 (1963), p. 18 and 34 (1965) and p. 19 (1966) for 1955 to 1966; and Dominion Bureau of Statistics, Preliminary of Education, 1966-67 and 1969-70, Catalogue No. 81-201, Ottawa: Queen's Printer, 1968, 1971, p. 45 (1968), p. 55 (1971) for 1966 and 1968.

2. Table 25.

Northwest Territories also includes funds for the native population in northern Quebec. However, the amount provided for native education in northern Quebec is almost negligible and thus the general magnitude of the federal governments share is not affected.

C. Breakdown Of Educational Expenditure

It is worthwhile to examine the changes in the relative proportions allocated to different types of education since this provides a clue to the probable direction of the educational system.

a) Canada

The general trend in Canada has been a relative increase in the proportion of total educational expenditures on post secondary budgets at the expense of elementary and secondary schools. Table 27 presents a breakdown of expenditure by type of education. Expenditure on elementary and secondary education has fallen from 74.6 percent in 1963-64 to 64.5 percent in 1970-71 with most of the relative increase going to post secondary education which increased from 17.0 percent in 1963-64 to 29.4 percent in 1971-72.

b) Northwest Territories

The relative shares of different types of education have also changed significantly in the Northwest Territories in a similar period but the change has affected different sectors of the educational system (See Table 28). While the categories in Table 27 and 28 are not directly comparable; it is clear that vocational and adult education are taking a relatively larger share; the combined

TABLE 27

EXPENDITURE ON DIFFERENT SECTORS OF EDUCATION

CANADA

(1963 - 1972)

		FORMAL		VOCATIONAL TRAINING	OTHERS
	<u>ELEMENTARY AND SECONDARY</u>	<u>TEACHER'S TRAINING</u>	<u>POST SECONDARY</u>		
1963-64	74.6	0.7	17.0	5.7	2.0
1964-65	70.7	0.8	20.9	5.6	2.0
1965-66	70.4	0.6	21.2	5.5	2.3
1966-67	66.2	0.6	22.9	7.1	3.2
1967-68	65.1	0.6	24.8	9.0	0.3
1968-69	66.1	0.5	27.4	5.4	0.4
1969-70	66.0	0.3	27.5	5.5	0.4
1970-71	65.4	0.2	28.3	5.4	0.5
1971-72	64.5	0.1	29.4	5.3	0.5

- Sources:
1. Dominion Bureau of Statistics, Survey of Education Finance, 1962, . . . 1966, Catalogue No. 81-208, Ottawa: Queen's Printer, 1965, 1967, 1968, 1969, 1970, p. 32 (1962), p. 32 (1963), p. 32 (1964), p. 32 (1965), p. 33 (1966).
 2. Dominion Bureau of Statistics, Preliminary Statistics on Education 1966-67, Catalogue No. 81-201, Ottawa: Queen's Printer, 1968, p. 46 for 1967-68.
 3. Dominion Bureau of Statistics, Advanced Statistics of Education 1971-72, Catalogue No. 81-220, Ottawa: Queen's Printer, 1971, p. 32 for 1968 to 1971.

TABLE 28

EXPENDITURE ON DIFFERENT SECTORS FOR EDUCATION

PERCENTAGE OF EDUCATIONAL EXPENDITURE

NORTHWEST TERRITORIES

(1960 - 1970)

	1960-61 ¹	61-62 ¹	62-63 ¹	63-64 ¹	64-65 ¹	65-66 ¹	69-70 ²
Administration	14	17	25	23	19	18	9
Federal Schools	58	56	50	51	42	40	46
Capital Expenses							22
Mission and Other Schools	2	1	1	1	4	3	
Pupil Residences	22	22	19	22	25	30	10
Vocational Education	4	4	4	2	9	8	8
Adult Education			1	1	1	1	4
Higher Education						3	1

- Sources: 1. Department of Northern Affairs and National Resources, Education Review, 1965-66, Ottawa: Queen's Printer, 1967, p. 29.
2. Government of the Northwest Territories, op. cit., 1970, p. 104.

share of these two sectors increasing from four percent in 1960-61 to 12 percent in 1969-70. This increase has been at the expense of the share allocated to pupil residences and federal schools which mainly provide academic elementary and secondary education. The combined share of these two sectors has fallen from 80 percent in 1960-61 to 56 percent in 1969-70. Thus, there has been a similar change in both Canada and the Northwest Territories towards providing a relatively greater share of educational budgets for higher education and a corresponding decrease in the share used by elementary and secondary education.

D. Expenditures Per Capita

The study of per capita figures is presented as follows: total education, elementary and secondary education, and finally vocational training. These figures are examined in terms of either of two bases, or according to both, when available, namely, per capita of total population or on a per student basis. These last indices are important because the per pupil figures measure educational expenditures in terms of the number of pupils in attendance. The per capita figures measure the number of people available to support public education. Thus, the "per capita" data are important in this compilation: they reveal an aspect which is of both general and particular significance - general in that the expenditures can be related to each other, particularly because they represent by concrete evidence how much each person should have to pay in order to receive a given service.

a) Canada¹

I. Per Capita

1. Total Education

In representing the GNP per capita, the economy grew from a level of \$1,776 per capita in 1955-56 to a level of \$3,770 in 1969-70. Moreover, the per capita total governmental budgetary expenditures amounted to \$471 in 1955-56 and to \$1,461 in 1969-70 (See Table 29). During this period, \$53 in 1955-56 and \$273 in 1969-70 were budgeted for total education.

2. Academic Education And Vocational Training

Elementary and secondary education was allotted \$44 per capita in 1956-57 (\$53 per capita for total education), and \$176 per capita in 1969-70 (\$273 per capita for total education). These figures indicate that between 1956 and 1970, elementary and secondary education increased absolutely, but, at a relatively lower rate than for all education. Data for vocational training education shows that in 1955-56, one dollar was spent per capita while in 1969-70 the expenditure increased to \$17 per capita for this sector. However, vocational training does not play as large a role in the educational system of the provinces as it does in the Northwest Territories.

1. See Table 29.

TABLE 29

TOTAL GOVERNMENT AND EDUCATIONAL EXPENDITURE PER CAPITA

CANADA

(1955 - 1970)

	CANADIAN POPULATED ¹	GROSS NATIONAL ¹ ALL ² PRODUCT	PER CAPITA	GOVERNMENT EXPENDITURES PER CAPITA	TOTAL EDUCATION ³ EXPENDITURE PER CAPITA	ELEMENTARY ³ AND SECONDARY EDUCATION (PUBLIC) EXPENDITURES PER CAPITA	VOCATIONAL ⁴ EDUCATION EXPENDITURE PER CAPITA	ALL EDUCATION ⁵ EXPENDITURE PER STUDENT	ELEMENTARY ³ AND SECONDARY EDUCATION EXPENDITURES (PUBLIC) PER STUDENT	VOCATIONAL EDUCATION ⁶ EXPENDITURE PER STUDENT
(Thousands)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
1955-56	15,698	1,776	471	53			1	274		837
1956-57	16,081	1,950	496	58	44		1	313	249	846
1957-58	16,610	1,981	518	67	49		2	338	269	844
1958-59	17,080	1,996	573	74	54		2	369	298	808
1959-60	17,483	2,074	623	84	61		2	400	322	815
1960-61	17,870	2,113	682	93	68		3	440	348	821
1961-62	18,238	2,142	740	105	76		4	508	375	390
1962-63	18,583	2,279	801	125	90		7	521	426	630
1963-64	18,931	2,402	808	131	92		7	575	431	530
1964-65	19,290	2,581	868	149	100		8	657	447	449
1965-66	19,644	2,794	920	174	113		9	773	466	389
1966-67	20,015	3,069	1,049	207	128		14		523	914
1967-68	20,405	3,220	1,206	227	143		20	970	561	821
1968-69	20,744	3,441	1,365	274	174		15	955	678	
1969-70	21,061	3,730	1,461	273	176		17	1,056	776	

TABLE 29 (Continued)

- Sources:
1. Dominion Bureau of Statistics, National Income and Expenditure Accounts, Catalogue No. 13531, Ottawa: Queen's Printer, 1972 (taken) from tape CANSIM identifier 00599.1.
 2. Table 23.
 3. Dominion Bureau of Statistics, Survey of Education Finance, 1959-60, 1962, 1963, 1964, 1965, 1966, Catalogue No. 81-208, Ottawa: Queen's Printer, 1963, 1965, 1967, 1968, 1969, 1970, p. 49 (1959-60) for 1957, p. 37 (1962) for 1958, p. 37 (1963) for 1959, p. 36 (1964) for 1960, p. 37 (1965) for 1961-65 and p. 38 (1966) for 1966, and Dominion Bureau of Statistics, Preliminary Statistics of Education, 1966-67, 1969-70, Catalogue No. 81-201, Ottawa: Queen's Printer, 1968, 1971, p. 46 (1966-67) for 1967-68, p. 56 (1969-70) for 1968 to 1970.
 4. Dominion Bureau of Statistics, Survey of Education Finance 1966, Catalogue No. 81-208, Ottawa: Queen's Printer, 1969, pp. 41-48 for 1954-55 to 1966, Dominion Bureau of Statistics, Advanced Statistics of Education, 1966-67, 1971-72, Catalogue No. 81-220, Ottawa: Queen's Printer, 1969, 1971, p. 9 for 1966-67, p. 32 for 1969-70.
 5. Tables 7A and 23.
 6. Dominion Bureau of Statistics, Preliminary Statistics on Education 1963-64, 1966-67, Catalogue No. 81-201, p. 13 (1966-67) and p. 21 (1963-64); and Dominion Bureau of Statistics, Advanced Statistics on Education 1967-68, Catalogue No. 81-220, Ottawa: Queen's Printer, 1969, p. 96 (1967-68) for enrolment figures; Dominion Bureau of Statistics, Survey of Education Finance, 1966, Catalogue No. 81-208, Ottawa: Queen's Printer, 1969, p. 48 for 1954 to 1966; and Dominion Bureau of Statistics, Advanced Statistics of Education, 1966-67, Catalogue No. 81-220, Ottawa: Queen's Printer, 1968, p. 9 for 1966-67 for expenditure figures.

II. Per Pupil

A finer comparison is the measurement of education expenditure per student. Total educational expenditure per student increases from \$274 in 1955-56 to \$1,056 in 1969-70. Figures for elementary and secondary education show that educational expenditures per student have grown at a slower rate than the total education expenditures. Expenditure for elementary and secondary education totaled \$249 per student in 1956-57 (\$313 per student for total education) while it was \$776 per student in 1969-70 (\$1,056 per student for total education). Education expenditure per student is higher in the Northwest Territories since the population is widely dispersed.

b) Northwest Territories¹

I. Per Capita

1. Total Education

At this point, examination of the data for the Northwest Territories serves to demonstrate clearly how the northern factor is important in this system. The northern factor results in higher costs, due to the permafrost, to the need to import all the tools, to the scarcity of the factors of production, to the need for creation of new techniques adapted to the special conditions, and so on. In 1955-56, the total expenditure on education per capita in the North was \$183 while it only

1. See Table 30.

averaged \$53 for the rest of Canada. In 1968-69, it represented \$637 per capita in the North while it was \$274 per capita in Canada for total education. This indicates that expenditure on education in the North is three times the level of educational expenditures per capita in the rest of Canada. However, in the provinces the rise in expenditure on education was in a large part due to an increasing proportion of expenditure on higher education. Thus, it is necessary to distinguish expenditures on different sectors.

2. Operating And Capital Expenditures

Data presented in the form of operating and maintenance expenditures and capital expenditure explain this high rise in cost due to the setting up of new schools. A division of expenditure according to operation and maintenance expenditures is revealing. Operating and maintenance expenditures per capita increased over a period of years while capital expenditures decreased. Operating and maintenance expenditure increased from \$136 per capita in 1958-59 to \$403 in 1968-69 whereas capital expenditure per capita fell from \$275 to \$143 in the same period (See Table 30).

II. Per Pupil

1. Total Education

In Canada, total educational expenditures per student in 1958-59 was \$369 compared to \$1,248 in the Northwest Territories.

TABLE 30 (Continued)

TOTAL NORTHWEST TERRITORIES ¹	GOVERNMENT EXPENDITURES PER CAPITA	TOTAL EDUCATIONAL ¹ EXPENDITURES OF THE NORTHWEST TERRITORIES PER CAPITA	OPERATING ² AND MAINTENANCE EXPENDITURES PER CAPITA	CAPITAL EXPENDITURES PER CAPITA	TOTAL EDUCATIONAL ¹ EXPENDITURES IN THE NORTHWEST TERRITORIES PER STUDENT	ESKIMOS ³ AND INDIANS ELEMENTARY AND SECONDARY EDUCATIONAL EXPENDITURE PER STUDENT	DISTRICT ELEMENTARY ⁴ AND SECONDARY EDUCATIONAL EXPENDITURE PER STUDENT
(\\$)	(\\$)	(\\$)	(\\$)	(\\$)	(\\$)	(\\$)	(\\$)

1968-69 667
1969-70 1,320

2,202

1,280

Sources: 1. Table 7B, 10 and 24.

2. Department of Indian Affairs and Northern Development, Annual Report, 1967-68, Ottawa: Queen's Printer, 1969, p. 20, and Table 7B.

3. Dominion Bureau of Statistics, Survey of Education Finance, 1966, Catalogue No. 81-208, Ottawa: Queen's Printer, 1969, p. 45 and Table 9.

4. Ibid., pp. 19-35-36 and Dominion Bureau of Statistics, Preliminary Statistics on Education, 1963-64, 1969-70, Catalogue No. 81-201, Ottawa: Queen's Printer, 1971, p. 57 (1963-64), pp. 55-57 (1969-70) and Table 11.

5. Department of Indian Affairs and Northern Development, Annual Report, 1967-68, Ottawa: Queen's Printer, 1968, p. 17 and Tables 24 and 28.

Thus, the level in the Northwest Territories was almost four times the average Canadian expenditure per pupil. In analyzing more recent data, educational expenditure per pupil was \$955 in 1968-69, while in the Northwest Territories the level was \$2,202. The two levels have approached each other in the course of recent years, but the level in the Northwest Territories is still almost three times that for Canada. The expenditure per pupil for the district schools is, in general, lower than the overall level for the Northwest Territories, with an average of \$1,562 for the Northwest Territories and \$889 for District schools in 1960-61, and \$1,924 and \$602 respectively in 1965-66. This may be explained by the economies of scale realized by schools, due to their advantageous location in towns such as Yellowknife and Hay River.

2. Academic And Vocational Education

In Canada, the expenditure per student for elementary and secondary schools was \$298 in 1958-59 while it was \$3,534 per student (Indian and Eskimo) in the Northwest Territories. In 1966-67, those figures were \$523 for Canada and \$2,092 for the Northwest Territories. Thus, there has been a decrease in the expenditure per student for elementary and secondary school in the Northwest Territories while there is an increase for Canada.

For vocational education, the figures are more similar for Canada and the Northwest Territories. In 1959-60, \$815 per vocational trainee was spent on average in Canada compared to

\$807 in the Northwest Territories. In 1966-67, \$914 was spent in Canada and \$1,659 was spent in the Northwest Territories.

Thus, the per capita expenditure in the Northwest Territories is increasing while in Canada it is relatively stable.

E. Projection Of Expenditures

For the projection of expenditures, it is advisable to adopt a point of reference. Given that both the Northwest Territories and Alberta possess well-developed economies in the primary sector, a superficial comparison of their rates of growth will yield the comparative reference needed (See Table 31).

a) Alberta¹

For Alberta, the economic growth rate is projected conservatively at 5 percent in real terms, while a price inflation of 2.5 percent per year is allowed for. The proportion of the expenditures for education in the total budget is 35 percent of the provincial revenues. If it is accepted that educational costs increase at the same rate as the increase in total budgetary expenditures, an increase of 7.5 percent can be foreseen for the immediate future. Moreover, the expenditure for a regular student at the elementary and secondary levels is \$650 per year in 1968-69. If this expenditure increases by six percent a year, the per capita expenditures will be \$1,300 in 1980-81; for an increase in expenditure by nine percent a year, the per capita figure will be \$1,870 in the same year 1980-81. The

1. The source for all information on the economy of Alberta is in Don Seastone, Economic and Demographic Future in Education, Alberta 1970-2005.

TABLE 31

ESTIMATES OF EXPENDITURES PER PUPIL
ALBERTA AND THE NORTHWEST TERRITORIES
(1980 - 1981)

	LOW ESTIMATE	HIGH ESTIMATE
Alberta ¹ (1980-81)		
- Primary and Secondary	\$1,300	\$1,870
- Post Secondary and Non-University	\$2,800	\$4,000
Northwest Territories ² (1981-82)		
- Primary and Secondary	\$2,325	\$2,655
- Vocational Training	\$1,990	\$2,430

Sources: 1. Seastone, Don. Economic and Demographic Futures in Education Alberta, 1970 - 2005, Edmonton: HRRC, pp. 8 to 10.

2. Based on these figures:

	<u>Elementary and Secondary</u>	<u>Vocational Training</u>
Estimates in 1970-71	\$1,500	\$1,000
Low-Estimate Rates	5%	9%
High-Estimate Rates	7%	13%

expenditures for a post secondary non university student is \$1,400 a year in 1968-69, or half the cost for a university student. In 1980-81, this amount is projected to double, by a low assumption, to \$5,600 per year, or triple by a high assumption, to \$8,000 per year².

b) Northwest Territories

An indication of the growth rate potential of the Northwest Territories is implicit in the governmental budget for the Territories. On the other hand, if it is conceded that the government has no power over resources, it is impossible to establish a comparison of educational expenditures with the other provinces. Non-tax revenues constitute a large share of the Northwest Territories budget, because the territorial government is heavily subsidized by federal funds. Nevertheless, the increase in governmental expenditures in the Northwest Territories is important because of the fact that educational expenditures cannot, in the immediate future, take up a significantly greater proportion of the budget. Also, if natives and non-natives are ethnically integrated in the schools, the expenditures for non natives must necessarily be in accord with the costs for natives, a federal responsibility. Table 24 demonstrates that the expenditures of the territorial government have risen at an average rate of 29 percent per year (between 1953 and 1968) and that

1. In Canada, "higher education is by far the fastest growing segment of education, 1965 increase being forecast at 22.5 percent and that of 1966 at 23.2 percent. Capital expenditures account for a large share of this forecast increase in expenditures of higher education". See Dominion Bureau of Statistics, Preliminary Statistics of Education 1965-66, Catalogue No. 80-201, Ottawa: Queen's Printer, p. 81.

educational expenditures have increased by an average of 23.4 percent a year. However, these average yearly increases are relatively unstable and are unreliable for projecting purposes. At the same time, it seems likely that educational expenditures could rise at an even more rapid rate for sometime but constraints on the rate of increase will begin to operate in the future.

Expenditures for formal education per pupil might increase at a rate of five percent (low assumption) or seven percent per year (high assumption).

A definite trend is hard to distinguish in the vocational training expenditures per pupil figures. One way of judging future expenditures is to compare these data with the rate of growth figures assumed for the rest of Canada at 7.5 percent¹. This indicates that under a low assumption, vocational training per pupil will grow at a rate of nine percent per year and a high assumption of 13 percent. To obtain an overall impression of growth rates and expenditures per pupil in Alberta and the Northwest Territories, it is advisable to consult Table 31.

The growth in per capita figures is projected higher than growth in per pupil figures because of the projected increased participation enrolment.

1. Dominion Bureau of Statistics, ibid., p. 41.

CHAPTER FIVE

CONCLUSION

A. Introduction

The previous two chapters have provided a breakdown of present per capita expenditure on education and the present level of enrolment plus a projection of per capita expenditure on education and total enrolment for the next ten years. The technique used for projecting enrolment and expenditure on education for the next ten years was based on the assumption that the present rate of change in expenditure on education and total enrolment will be fairly constant. A time series regression technique which could introduce the effects of other variables on expenditure on education and enrolment was not employed for several reasons. There is a shortage of historical data and the data that **are** available have been subject to such fluctuation that there is no constant relationship between variables. Thus Chapter Five will combine the results of the last two chapters to present estimates of total expenditure on education, as well as a breakdown of future estimated expenditures. The results of this study presented in previous chapters will be briefly reviewed before the results of the projection are presented. The concluding section of this chapter will examine the assumptions on which this study was based. The possibility of an alternative approach to this study, based on different assumptions, will be discussed without enlarging upon this alternative.

B. Summary Of This Study

In this study, it has been necessary to trace the history of

education in the Northwest Territories during the period of the last two decades 1950 to 1970. This review of the past is prerequisite to a description of the present system of education, because it allows the distinction of various responsibilities within this system to become apparent: federal financial responsibility for natives, territorial financial responsibility for non-natives, federal responsibility before 1969 and territorial responsibility since 1969 for the educational system as a whole.

Moreover, a description of the educational system throws into relief the particular conditions of the Northwest Territories, such as company schools operating on an individual basis and giving evidence of widely dispersed services, district schools, reflecting an evolving society which is adapting itself to new conditions, and territorial schools, their residence system demonstrating how education was introduced into the North from the top to the bottom of society. Finally, the present importance of vocational training is merely an indication of the greater contribution this sector has yet to make to the economy.

The technique used for estimating and projecting school enrolment is adapted to the specific conditions of the region; thus, the kindergarten and grade one levels are presented in terms of the percentage of five and six year-old groups. However, after grade two, account must be taken of the number of drop-outs and retarded pupils, a factor which is more important for minority groups. The technique of grade ratio, instead of that of age ratio, is used. For vocational training which includes, for purposes of this study, prevocational, high school and

post-secondary vocational training as well as apprenticeship programmes, it seems advisable to analyse it according to the 14-21 age group. Moreover, the behavior of the Indians within the framework of educational attitudes is significantly different from that of the Eskimos so that relevant data must be presented under separate headings.

An analysis of expenditures reveals that expenditures for the same services have been considerably higher in the Northwest Territories. Because of the special position of the Northwest Territories, it is impossible to compare the economic indicators of the Gross National Product (GNP) and Personal Income (P.I.) with educational expenditures¹, as can be done in the provinces. However, the per capita figures, although they represent a fairly superficial inquiry, show themselves as being very significant for the Northwest Territories: considering all expenditures on a per capita basis or according to per pupil figures, make a comparison between the provinces and territories possible.

Such a comparison reveals the gap between total education expenditures for Canada and the Northwest Territories, a gap which has nevertheless narrowed with the passage of time. Expenditures for

1. "Wide differences between nations in the efficiency with which resources devoted to education are employed can easily occur; and since there are no satisfactory measures of efficiency, such differences are difficult to recognize and balance. Climate, geographical features, the type and abundance of natural resources, in various countries may profoundly influence the proportion of national income that must or should be expended upon education. In the past, social pressures and different social philosophies have impelled some nations to spend more on education than they might otherwise have done and perhaps more than was actually required", in Wilkinson, op. cit., p. 30.

elementary and secondary education in the Territories increased more slowly than the total education expenditure. This is due to the increasingly important roles of adult education and vocational training in the total educational picture. Finally, a separate analysis of operation and maintenance expenditure and capital expenditure shows that capital expenditure is taking up a decreasingly important part of the expenditures; wages and salaries will take an increasing part of the budget in the future.

A final comparison is that of per pupil expenditures. The difference between the Canadian level of expenditures and that of the Northwest Territories is very marked, although it is expected to decrease in the future. It is interesting to note, moreover, that the school district per pupil expenditure has recently approached the Canadian level, a development due to the exceptional situation of the town schools in Yellowknife and Hay River. The trend is difficult to ascertain for the vocational training expenditures per pupil in the Northwest Territories.

C. Results Of Projection

These projections represent a study of two factors; school enrolment and expenditures. An analysis of these two groups of data reveals the prospective trend of educational expenditures for Indians and Eskimos over a period of ten years (1971-1981).

In spite of unpredictable changes within the tendencies noted, future development must continue to be anticipated if there is to be rational planning in this area. Therefore, this study considers certain tendencies

and attempts to predict their outcomes, although any conclusions regarding the future must be recognized as necessarily tentative.

1. School Enrolment

Two factors influence the school enrolment data: population¹ and age-grade ratios. This latter set, the age-grade ratios, represent the most conservative tendencies in this area, that is, a slow increase in school population has been assumed. Of course, with more recent statistics, it would always be possible to discover a different trend due to changing conditions impossible to foresee at the present time². Table 32 represents the Indian and Eskimo school enrolment. This table shows regular school enrolment, vocational training enrolment, and finally total school enrolment. It should be noted that the increase in vocational training among the Eskimos is greater than that among the Indians.

-
1. The population graph was drawn up by Catherine Cornelssen, staff researcher for the Boreal Institute. These data are only preliminary and are subject to change with the reception of any new information (especially the results of the 1971 census, which will be available towards the month of October). For consultation, see Catherine Cornelssen, "Preliminary Figures", Demographic Projections Models 1971, Edmonton: Northern Resources Research Project, 1971. It would have been impossible to advance this study without the assistance of Miss Cornelssen: my sincere thanks are due to her for her help and advice.
 2. The computer programme for projecting according to the method of this study was written by Dominic Leung, of the Northern Resources Research Project. The programme has a projection capacity of 40 years, accounting for the number of students in each grade for each year. Moreover, the programme envisages a graphic presentation of the total number of students in each grade for each year, and also the total number within the maximum period of 40 years for each grade level.

TABLE 32

TOTAL ENROLMENT OF INDIANS AND ESKIMOS

ACTUAL AND PROJECTED

(1968 - 1981)

YEAR	ELEMENTARY AND SECONDARY SCHOOL ENROLMENT	VOCATIONAL TRAINING ENROLMENT	TOTAL ENROLMENT
A. INDIANS			
1968	1,227	202	1,429
1981	1,900	399	2,299
B. ESKIMOS			
1968	2,131	582	2,713
1981	4,002	1,295	5,297

2. Projection Of Expenditures

The preceding chapter has served to explain the choice of a growth rate in educational costs in the Northwest Territories. At this point, given a conservative estimate of future school enrolment, it can be seen that the "high assumption" expenditures can be combined with the school enrolment projection, without, however, approaching a level impossible to support financially¹.

3. Total Expenditures

In ten years, if the hypothesis adopted in this study are realized, the total expenditures for education will be about \$13,700,000 for the Eskimos and about \$6,000,000 for the Indians. From this total sum (\$19,700,000), \$4,100,000 will support vocational training while \$15,600,000 will serve to finance formal education² (See Table 33). In conclusion, if educational policies in ten years are consistent with those presently in force, financing these expenditures will be relatively easy, considering that the proportion of the federal government educational budget which is allotted to the education and training of Indians and Eskimos is very small.

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1. For the low and high estimates, consult Table 33.
 2. In order to estimate expenditures in 40 years, the cost per pupil is simply compared with the number of pupils foreseeable in 40 years. These data are available from the Northern Resources Research Project of the Boreal Institute, The University of Alberta.

TABLE 33

TOTAL PROJECTED EXPENDITURES FOR EDUCATION

INDIANS AND ESKIMOS

NORTHWEST TERRITORIES

(Thousand \$)

	INDIANS	ESKIMOS	TOTAL
<u>LOW ASSUMPTIONS - 1981-82</u>			
Primary and Secondary	4,417.5	9,304.6	13,722.1
Vocational Training	794.0	2,577.0	3,371.0
TOTAL	5,211.5	11,881.7	17,093.2
<u>HIGH ASSUMPTIONS - 1981-82</u>			
Primary and Secondary	5,044.5	10,625.3	15,669.8
Vocational Training	969.5	3,146.8	4,116.4
TOTAL	6,014.0	13,772.1	19,786.2

Source: Tables 31 and 32.

D. Concluding Comments

It is important to distinguish the limited aim of this study since it attempts only to project the likely level of enrolment and expenditure on education in the next ten years. As such it has only a limited subjective element and there is no direct analysis of the value of the type of prevailing educational system on philosophy.

That education forms an important part of our way of life and that it must, therefore, be carefully conceived and directed is axiomatic in our society, and the continuing role and place of education is accepted in this study. There has been no consideration given in this study to the possibility of a change in the role or philosophy of education. However, as was pointed out in Chapter One, there are two main goals of the educational system and the relative importance of these two may change. The general goal of education is to expand man's horizon and develop his innate abilities while a more specific educational objective is to develop man's ability and skills to enjoy meaningful and full employment.

It seems clear that there has been an increasing emphasis on the skill creation aspect of education since the share of vocational training in educational expenditure is increasing. At the same time, it is not clear that this trend will continue.

Although the educational system has been conceived with the aim of benefiting the native peoples by giving them the advantages of a modern technological economy, and at the same time of trying to preserve their cultural heritage, it appears to be very difficult to measure the

success. However, there is some dissatisfaction with the results of the present system and it may be changed in the next decade invalidating some of the results of this study. "Cultural minorities, often the worst victims of an elitist approach to education and usually in need of radical economic and social development, are becoming a prime object of educational programmes based on the new educational expectations. But results are not always as planned. Widespread illiteracy, school repetition and drop-out, high unemployment rates, cynical or apathetic attitudes, or a general inability to adjust to modern society are often found among such groups - even where educational facilities and enrolments have been impressive"¹.

There are also a number of reasons, besides those specifically applying to the native population of the Northwest Territories, why emphasis on the "job-creation" aspect of education may be reduced in favor of a more general approach relating man to his environment and society. The high dropout rate and the corresponding high rate of unemployment in the Northwest Territories suggests that the present educational system is not economically efficient in terms of accepted Canadian criteria. The experience in southern Canada, where the increasing rate of technological change is also reducing the long-term usefulness of any specific job skill, may lead to a reconsideration of the validity of specific skill training. If it seems clear that Canadian society may have to reduce the emphasis on the skill creation

1. J.C. Cairns, Cross-Cultural Education, "A Presentation of Certain Unesco Experience, (Unesco Paris)," Montreal, August 1962, in Conference on Cross-Cultural Education in the North, p. 2.

aspect of education, it is even more likely to happen in the Northwest Territories where the present educational system has clearly failed, in some aspects, in relating education to the needs of the native community.

To the extent that this shift in emphasis takes place, this study will be less accurate.

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